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Nebraska Farm Real Estate Market Developments 1998-99

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The authors express sincere appreciation to the survey reporters for their participation in the annual UNL Nebraska Farm Real Estate Market Survey. Without their input, much of the information within this report would not exist.

This information is also available through the Internet. The website address is:

http://www.ianr.unl.edu/agecon/realestate

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Summary

After 11 consecutive years of value increases, Nebraska agricultural real estate values experienced modest declines during the year ending February 1, 1999. According to the UNL Nebraska Farm Real Estate Market Developments Survey, values fell an average of 2.8 percent from year-earlier levels. As the year 1998 developed into an income-shortfall year across virtually all of the state's agricultural sector, it was almost inevitable that a more cautious market attitude would exist and land values decline. In fact, for many market observers, the surprise was not that early 1999 values were down, but rather that the value decrease was generally very marginal.

According to survey reporters, a host of market forces are contributing to downward value adjustments, led primarily by historically low crop and livestock prices and associated deterioration of the financial health of existing land owners. And while relative stability still characterized the land market in early 1999, market observers were quick to point out that another year like 1998 (in terms of agricultural income) could lead to more substantial land value declines in 1999. In fact, over half of the survey reporters were expecting land value declines in 1999, averaging more than 7 percent.

Reflecting the stress in the agricultural economy, negotiated cash rental rates for 1999 were down from 1998 levels. For cropland, the declines were typically in the 2 to 5 percent range. Pasture and rangeland rental rates for 1999 were generally stable to slightly lower, as demand for forage remained relatively strong.

As for annual percentage net rates of return on agricultural land, the trend over this decade has been one of gradual decline as values have tended to rise faster than the growth of land earnings. Annual returns as a percent of current value have declined across all land types–irrigated cropland, dryland cropland, and pasture land. However, given the recent downturn in the agricultural economy, this trend has only accelerated as annual average returns have fallen faster than land values. Unless current economic conditions and/or future economic expectations improve for agriculture, annual percentage rates of return may fall to a level that market participants will not accept. If that happens, then this measure may be a leading indicator of further value decline in the near future as market participants readjust their long-term income expectations.

On the basis of over 450 reported actual sales during 1998, the general market characteristics over the past year have tended to remain fairly stable. Active farmer buyers remain the primary buyer group of a market comprised primarily of land parcels that are purchased for add-on purposes. Building improvements are the exception rather than the rule on properties changing ownership. The proportion of purchases for cash (involving no debt financing) continues to grow and was approaching half of the 1998 market transactions. The preponderance of market activity occurs within a locality with most buyers being local. However, in some areas of the state, non-local buyer interest is a significant presence in the market.

Nebraska Farm Real Estate Market Developments 1998-99

Introduction

This year marked the 22nd annual Nebraska Farm Real Estate Market Survey. The Department of Agricultural Economics-UNL is responsible for the regular monitoring and analysis of agricultural land market conditions across the state. The data and report series provide valuable insight into the characteristics and trends of the market, both over time and across geographic area.

In the February 1999 statewide survey, a panel of about 150 reporters provided agricultural land market information for their respective areas of the state. The respondents are comprised of farm appraisers, professional farm managers, farm real estate brokers and auctioneers, and other real estate professionals all of whom have a working knowledge of agricultural real estate market conditions in their areas. In most instances, these reporters have been participating in this annual survey for a number of years, thus providing valuable continuity to the data and analysis.

The survey information contained in this report consists of two basic types. The first type is reporter estimates of current market values and cash rental rates for the various classes of agricultural land. Reporters are asked to provide their best estimates of land values as of February 1st as well as the typical cash rental rates for the current year. These "point-in-time" estimates are then aggregated into the eight agricultural statistics districts in the state, and averages and ranges calculated. In the case of land value estimates, the district results are then aggregated to the state level using an acreage weighting procedure to arrive at all-state estimates. When compared against estimates of the previous year, measures of percentage change over the previous 12 months can be determined. This procedure has been in place over the entire life of UNL's monitoring and reporting series–thus the data series is considered a reliable trend indicator.

The second type of market information collected in the survey is information about specific sales which have occurred over the previous twelve months. In the 1999 survey, reporters provided descriptive information on more than 450 actual agricultural real estate sales which they regarded as "typical" in their area of the state. These sales totaled more than 200,000 acres of land and represented an estimated 15 percent of all agricultural real estate transactions which occurred during 1998. On the basis of this sales information, additional insight into the nature and dynamics of the market is revealed.

In addition to the survey results, this report contains information from other sources as well. The USDA series on state land values is included in the appendix. Also included in this year's report is the county-level average value series derived from the U.S. Agricultural Census. County average values from the recently released 1997 Census are included in the statistical appendix along with historical census values going back 60 years. These series can provide important trend information farther back than the UNL series, as well as giving some measure of county-specific values.

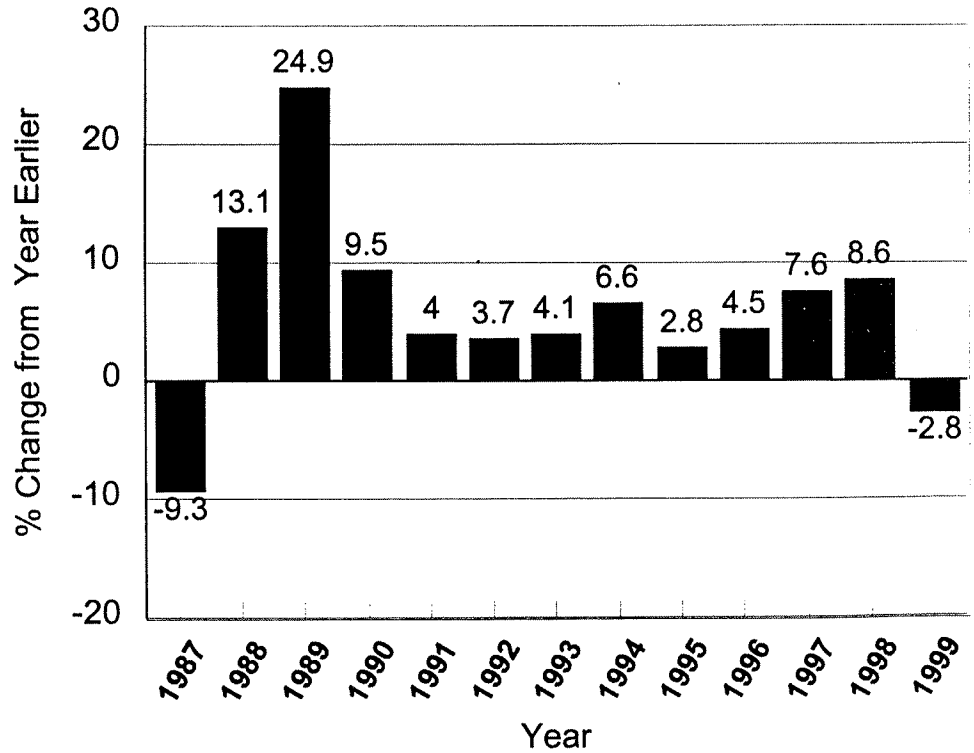
Finally a caveat to the information contained within this report. Because of the diversity of agricultural land market conditions within local markets as well as across regions of the state, the reader should use this information only as a general overview of market conditions and trends. It may or may not reflect actual market values, cash rental rates, or market characteristics of a specific localized market or property. If the latter is deemed necessary, then the services of real estate appraisers and other real estate professionals should be obtained.

Agricultural Land Values in Historical Context

Since agricultural real estate represents a long-term investment climate, value changes should be considered in a multi-year context. This is particularly important for the current situation in Nebraska. According to the UNL real estate value series, the statewide average value of agricultural land fell 2.8 percent during the 12 months ending February 1, 1999. However, as indicated in Figure 1, that rather modest percentage decline follows 11 consecutive years of value increases which averaged 8 percent per year. So, even with the inclusion of the recent decline of this last year, there has still been a 7 percent annual increase over the past 12 years.

The fact that agricultural land values have followed a rather steady upward trend throughout most of this decade suggests a general market optimism based upon several market forces. Up until 1998,

Figure 1: Nebraska Farmland Values: Annual Percentage Change, Years Ending Feb. 1, 1987-1999.



SOURCE: UNL Nebraska Farm Real Estate Market Development Surveys.

generally favorable farm income levels were prevalent, along with satisfactory financial market conditions. These, in combination with perceived future income prospects from expanded world market demand, tended to lead both buyers and sellers to raise the range of negotiated prices. When 1998 developed into an income shortfall year across virtually all of the state's agricultural sector, it was almost inevitable that a more cautious market attitude would develop and curb the upward value advances. In fact, for many market observers, the surprise was not that early 1999 values were down, but rather that the value decrease was generally very marginal.

In effect, the agricultural land market during this decade has been performing effectively–moving in a deliberate manner to adjust to changing expectations over time rather than spiking and plunging with big dollar swings which a more speculative, short-run market environment might do. This is not to suggest that the directional shift in average values observed this past year is only an aberration from an upward-moving trend. Quite the contrary, should the years, 1999 and 2000, be a continuation of significantly-reduced agricultural income levels, the land market will very likely continue a downward value trend until values are realigned with adjusted long-run income expectations of market participants. However, the downward movement would likely be more deliberate and not parallel the "economic melt down" which many described as what hit the heavily-leveraged agricultural land market of the early 1980s, or more recently, Japan's real estate market collapse.

Before proceeding to the next section, two comments are appropriate. First, the 1999 UNL value series that appears here has been updated from preliminary value estimates released in March of this year. While the changes are relatively minor, they are considered appropriate since they reflect a more comprehensive data base that became available after the preliminary findings were released.

Second, the reader is advised that the UNL survey results showing a 2.8 percent decline in the state's all-land average value for the year ending February 1, 1999 does not correspond with January 1 findings from the USDA value series. As can be noted in Appendix Table 1, the latter survey indicated a 2.3 percent increase in average value during 1998 for Nebraska. The fact that one survey shows an increase while the other a decrease (albeit small) may seem to suggest that one or the other is in error. However, characteristics of these independently-run surveys may partially explain the difference. The fact that the USDA series is tied to January 1st rather than February 1st, as is the UNL series, could mean that the USDA survey did not pick up a directional change in the market which could largely have occurred in the first month of 1999. Since the bulk of agricultural real estate transactions occur between December 1st and March 1st, the UNL survey picks up essentially two of the three primary trading months, and therefore tends to be a more current indicator than the USDA series. The difference may also be partially explained by the type of respondent surveyed. While the UNL survey samples appraisers and other real estate professionals who are actively involved with the market, the USDA series is based on a sample of agricultural producers who may or may not have an active awareness of current land market conditions. Moreover, the land value inquiry is only part of a larger survey of crop information requested of these USDA respondents; thus both current knowledge of and attention to agricultural real estate market conditions may be secondary to other survey information collected.

1999 Land Value Patterns

As previously noted, the 1999 UNL Nebraska Farm Real Estate Market Developments Survey revealed some weakness in values during the previous 12-month period. The state all-land average value as of February 1st, 1999 was $690 per acre, 2.8 percent below the level recorded 12 months previously (Figure 3 and Table 1). This modest decline at the state level was evident across nearly all land types, the exception being tillable grazing land which registered a 2.4 percent increase for the 12-month period. The fact that virtually all land types experienced some value decline is indicative of the recent economic stress across the entire farming sector. All of the primary crop enterprises

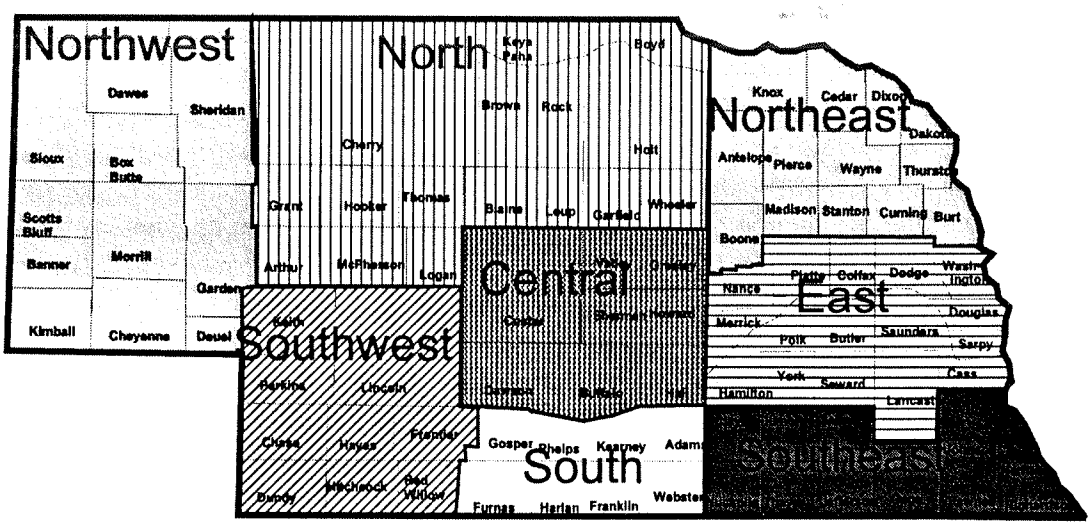


Figure 2. Nebraska Agricultural Statistics Districts.

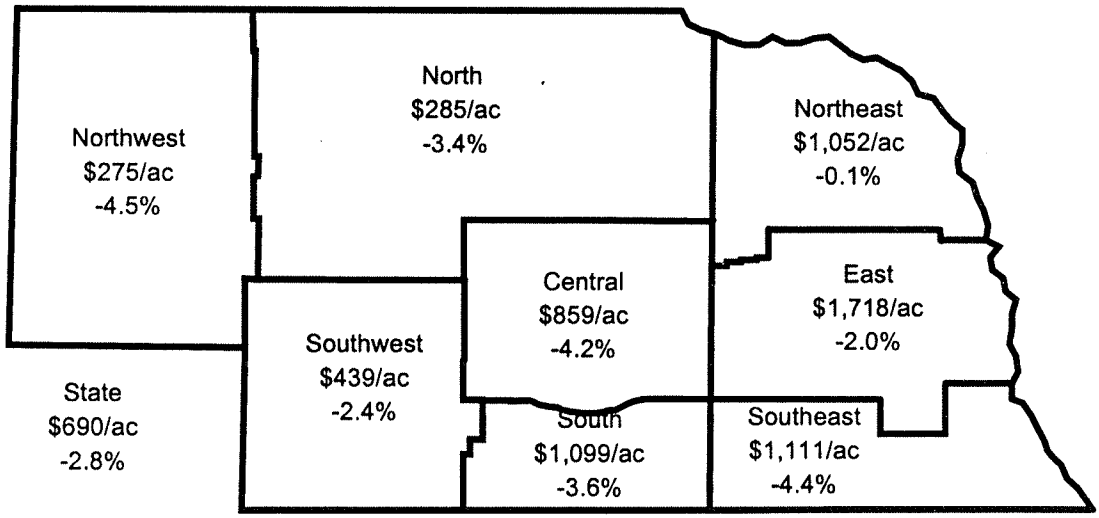


Figure 3. Average Value of Nebraska Farmland, February 1, 1999 and Percent Change From a Year Earlier.

Table 1. Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, Feb. 1, 1998 - Feb. 1, 1999.[a]

Type of Land and Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[b]
	Dollars Per Acre								
Dryland Cropland (No Irrigation Potential)									
Rptd. in 1999	346	367	968	635	1,462	428	740	953	749
Rptd, in 1998	385	390	982	631	1,477	457	753	956	767
% Change	-10.1	-5.9	-1.4	0.6	-1.0	-6.3	-1.7	-0.3	-2.3
Dryland Cropland (Irrigation Potential)									
Rptd. in 1999	436	480	1,216	956	1,792	538	1,173	1,172	1,081
Rptd, in 1998	482	510	1,219	986	1,810	578	1,216	1,250	1,115
% Change	-9.5	-5.9	-0.2	-3.0	-1.0	-6.9	-3.5	-6.2	-3.0
Grazing Land (Tillable)									
Rptd. in 1999	165	270	569	456	735	234	470	575	306
Rptd, in 1998	153	265	550	461	741	227	467	575	299
% Change	7.9	1.9	3.5	-1.1	-0.8	3.1	0.7	0.0	2.4
Grazing Land (Nontillable)									
Rptd. in 1999	127	192	411	350	507	187	327	476	219
Rptd, in 1998	128	199	395	366	516	189	337	473	224
% Change	-0.8	-3.5	4.1	-4.4	-1.7	-1.0	-3.0	0.6	-2.2
Hayland									
Rptd. in 1999	318	325	507	457	625	330	412	502	359
Rptd, in 1998	315	345	517	472	640	336	437	497	373
% Change	1.0	-5.8	-1.9	-3.2	-2.3	-1.8	-5.7	1.0	-3.7
Gravity Irrigated Cropland									
Rptd. in 1999	894	1,050	1,575	1,861	2,247	1,198	1,945	1,813	1,768
Rptd, in 1998	925	1,150	1,575	1,972	2,340	1,200	2,042	1,936	1,847
% Change	-3.3	-8.7	0.0	-5.6	-4.0	-0.2	-4.7	-6.3	-4.3
Center Pivot Irrigated Cropland[b]									
Rptd. in 1999	750	984	1,581	1,616	2,288	1,124	1,830	1,806	1,428
Rptd, in 1998	829	1,020	1,583	1,698	2,332	1,139	1,863	1,907	1,471
% Change	-9.5	-3.5	-0.1	-4.8	-1.9	-1.3	-1.8	-5.3	-2.9
All Land Average[c]									
Rptd. in 1999	275	285	1,052	859	1,718	439	1,099	1,111	690
Rptd, in 1998	288	295	1,053	897	1,754	450	1,140	1,162	710
% Change	-4.5	-3.4	-0.1	-4.2	-2.0	-2.4	-3.6	-4.4	-2.8

[a] SOURCE: 1998 and 1999 UNL Nebraska Farm Real Estate Market Developments Surveys.

[b] Value of pivot not included in per acre value.

[c] Weighted averages.

saw serious price declines in the last half of 1998 and into 1999. By early 1999, corn and wheat prices were 15 to 20 percent below year-earlier levels while soybean prices were down 20 to 25 percent. At the same time, livestock prices were down, with hog prices plunging temporarily to 40-year lows.

By region, all-land value declines of more than 4 percent were recorded in the Northwest, Central, and Southeast for the year ending February 1, 1999. For some land types in these areas, the decline was even more pronounced. For example, dryland cropland in the Northwest fell 10 percent in value, driven heavily by income shortfalls among wheat producers (similar conditions for dryland values prevailed in the Southwest District where extensive dryland wheat production exists) . Irrigated land in the Central and Southeast Districts showed somewhat larger percentage downward adjustments for the year as cash grain producers readjusted long-run economic expectations around lower corn prices, uncertain export markets, and a soon-to-end federal farm program.

Those same factors were also dampening irrigated land values in the East, but the impact was buffered in part by more investor demand and 1031 tax exchanges closer to the state's metropolitan areas. As one survey reporter from the East District commented, "through the 1031 tax exchange, buyers are willing to bid agricultural land values up as a means of reducing taxes (capital gains) on development land they have recently sold at high prices".

The Northeast District was the most stable area during this period, with the all-land average value being basically unchanged. The fact that the Northeast District has had the strongest land market in this recent period may reflect in part the relatively higher ratio of land returns to value for the past several years. As indicated in Table 8 later in this report, the estimated net rates of return as a percentage of current market value to the three basic land types have consistently been higher in the Northeast than that observed in several of the other regions. Several years of favorable crop production under both dryland and irrigated conditions have contributed to this. In other words, the income basis of current values was relatively stronger in the Northeast going into 1998; and thus values tended to stabilize rather than decline as commodity prices deteriorated during the year.

In general, market conditions during 1998 and into early 1999 were marked by caution. Both buyers and sellers exhibited restraint, taking a "wait-and-see" attitude. Survey reporters from around the state indicated there had been reduced market activity. One reporter's comment captured the essence of numerous others:

> "Generally little land has been moving. No land is being forced (financially) unto the market. Asking prices remain high, but buyers have no sense of urgency; they feel they should be patient and the price will come down."

Many other reporters also indicated that the better quality land has remained in demand, while interest in the more marginal quality parcels has subsided. Only in those instances where marginal agricultural land has particular recreational and/or aesthetic attributes to attract non-farmer buyers

does such land exhibit strong buyer interest; where that is the case, the selling prices can be bid far beyond the parcel's agricultural value.

Factors Impacting Agricultural Land Markets

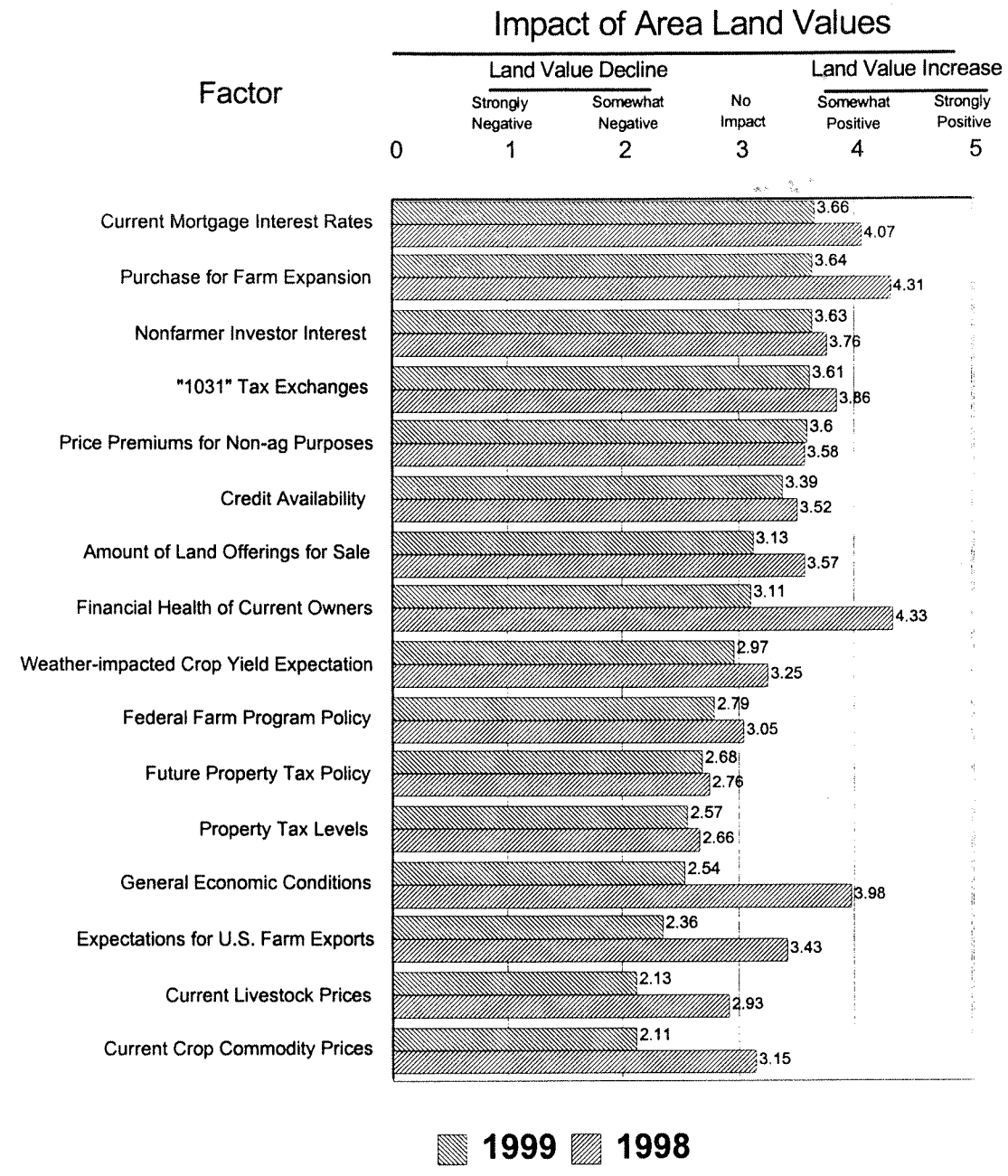
For the past several years, UNL survey reporters have been asked to rate the relative influence of a number of forces which may be impacting the market for agricultural real estate in their area. Using a rating scale which ranges from 1 (strongly negative) to 5 (strongly positive) with 3 being essentially no impact upon land values, reporters have shared their opinions about 16 different factors that are frequently associated with the land market. This year's results are presented in Figure 4. Of the 16 items, 8 were reported in 1999 to have a somewhat positive impact upon current land values and the remaining 8 had negative influences upon values. At the top of the list of perceived positive influences were mortgage interest rates, followed closely by buyer interest for farm expansion, non-farmer investor interest, "1031" tax exchanges, and price premiums paid for non-agricultural purposes. In contrast, the factors perceived as having the most negative influence upon land values (contributing to land value decline) were, not surprisingly, low crop and livestock prices, and farm export expectations.

Perhaps the most noteworthy aspect of this 1999 rating sheet is the pronounced change it represents from the same analysis of reporter perceptions done just one year earlier. For example, crop commodity prices were still seen as having a mildly positive impact on land values in early 1998, but were seen as having the most negative impact in February of 1999. Likewise, farm export expectations were seen as a relatively strong upward influence in early 1998 land values, but by 1999 the export picture was dampening agricultural land values.
Even among those factors seen as having positive influence upon values in 1999, many were perceived as being much less positive than what was reported a year previously. The most dramatic change was the shift in respondent perceptions regarding the financial health of current owners, which fell in ranking from 4.33 in 1998 to just 3.11 in early 1999. This shift in tone regarding financial health of owners was also evident in the following comments which reflect those made by numerous reporters:

> "If commodity prices continue to be depressed into 1999, I expect more land coming up for sale in 1999."
>
> "This market is poised for a 'free-fall' given current and projected crop and commodity prices."

In short, the perception of the survey reporters in early 1999 appears to have become much more cautious, with a weighting of expectations more toward land value decline than increase. From this sample of survey reporters, one could infer a much different market dynamic in the months to follow.

Figure 4. Reporters' Rating of Factors Influencing Agricultural Land Values in Their Areas of Nebraska, February, 1999 in Comparison with February, 1998.



SOURCE: 1998 and 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

Current Ranges in Land Values

Uniformity is NOT a strong characteristic of agricultural land parcels. Even within a fairly homogeneous local real estate market and among similar land classes, the difference in value among parcels can be significant. Of course, with Nebraska being a highly-diverse state in terms of soils, climate, and market access, this phenomenon is compounded even more. The result is that even within fairly small geographic areas, the range in values from county-to-county, township-to-township, section-to-section, and even parcel-to-parcel can be wide.

Variation in real and anticipated agricultural productivity can explain much of the observed value ranges within the land market. Consequently, UNL survey reporters are asked to indicate what they observe in their market areas regarding the current range in per acre values for both low grade and high grade land in each of the land classes. What constitutes high grade and low grade is not specified, but instead is left to the professional judgement of the individual reporter. However, for cropland at least, reporters tend to follow traditional classes of I through IV used by USDA's Natural Resource Conservation Service (formerly Soil Conservation Service).

The value variation across quality differences are aggregated to sub-state levels by land type in Table 2. Value comparisons with the reported grade variations of recent years are also presented in Appendix Table 6.

As has been observed over the length of the UNL value series, parcels within a local agricultural land market and of the same land type can vary in per acre value by as much as 25 to 50 percent. The 1999 value ranges are no exception. For example, low grade dryland cropland in the East District averaged $1,060 per acre as of February 1, 1999, 27 percent below the district average for the entire land class; while the high grade land in that area was $1,727 per acre, or 18 percent higher than the overall average. What this implies is that within any local market in the East District, regardless of the level of average dollar value, the range in value within a particular land class will tend to reflect these percentages. Similarly, nontillable grazing land in the North District averaged $192 per acre on February 1, 1999, but ranged from $160 for low grade grazing land to $250 for what survey respondents called high grade land--a range from 17 percent below average to 30 percent above the average.

As for changes in value during the year ending February 1, 1999, a number of reporters indicated that demand for lower-quality land in their areas had dropped off and was declining in value while land at the high end of the quality scale tended to be holding its value better. While that may have been the case in some of the local markets being observed, this was not a wide-spread observation across the state. As can be calculated from the historical series in Appendix Table 6, value changes from the previous year represent a "mixed bag." In the Northwest, South, and Southeast Districts, land in the lower end of the quality scale experienced larger percentage declines than that at the higher end. However, in the North, Northeast, and Southwest Districts, the higher quality land within the various classes tended to show larger percentage declines for the year.

Table 2. Average Reported Value Per Acre of Nebraska Farmland for Different Types and Grade of Land in Nebraska by Agricultural Statistics District, February 1, 1999. [a]

Type of Land and Grade	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
	Dollars Per Acre							
Dryland Cropland (No Irrigation Potential)								
Average	346	367	968	635	1,462	428	740	953
High Grade	405	465	1,200	765	1,727	495	885	1,255
Low Grade	235	270	725	500	1,060	355	500	725
Dryland Cropland (Irrigation Potential)								
Average	436	480	1,216	956	1,792	538	1,173	1,172
High Grade	500	575	1,385	1,170	2,055	610	1,360	1,345
Low Grade	355	360	960	700	1,350	450	790	810
Grazing Land (Tillable)								
Average	165	270	569	456	735	234	470	575
High Grade	205	365	710	585	780	285	555	670
Low Grade	130	230	505	410	480	215	350	455
Grazing Land (Nontillable)								
Average	127	192	411	350	507	187	327	476
High Grade	150	250	515	400	605	215	390	565
Low Grade	95	160	345	290	395	155	235	330
Hayland								
Average	318	325	507	457	625	330	412	502
High Grade	380	455	640	545	800	455	445	580
Low Grade	230	240	425	375	535	315	260	385
Gravity Irrigated Cropland								
Average	894	1,050	1,575	1,861	2,247	1,198	1,945	1,813
High Grade	1,090	1,335	1,710	2,045	2,510	1,280	2,140	1,980
Low Grade	600	900	1,240	1,325	1,740	900	1,335	1,355
Center Pivot Irrigated Cropland [b]								
Average	750	984	1,581	1,616	2,288	1,124	1,830	1,806
High Grade	830	1,150	1,780	1,840	2,585	1,135	1,965	1,950
Low Grade	530	750	1,275	1,200	1,720	800	1,270	1,220

[a] SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.
[b] Value of pivot not included in per acre value.

Characteristics of Real Estate Sales During 1998

As previously noted, reporters in the 1999 survey provided descriptive information on more than 450 agricultural real estate sales that occurred during the previous 12 months. They reported on sales which they regarded as arms-length transactions that were typical of the local market activity. The total acreage in these reported sales was more than 200,000 acres, ranging from small 40 acre cropland parcels to large ranch units of several thousand acres. Assuming a typical ownership turnover rate of 3 percent per year, this sample essentially represents 15 percent of all agricultural real estate acreage changing ownership in 1998. Consequently, details from this sample provide a reliable perspective of current market activity, while comparisons with sales data from earlier UNL surveys provide valuable trend analysis.

Considering transactions by type of seller, estate settlements represented the largest seller class in 1998; although the variation from region to region was considerable, ranging from 14 percent of the reported sales in the North District to 60 percent of the transactions in the South District (Table 3). The second largest class of sellers was nonfarmers, which was particularly pronounced in the eastern part of the State. In many instances, this class represents heirs to agricultural estates who, in time, choose to sell their inheritance rather than maintain ownership.

Sellers who were quitting farming/ranching constituted the third largest seller group in 1998, accounting for 22 percent of the sales at the state level. This percentage was up somewhat from the two previous years (15 percent in 1996 and 18 percent in 1997) and may be a reflection of declining economic conditions. In more robust economic times, farmers who are choosing to quit farming due to retirement and/or health reasons will often choose to maintain all or a portion of their land ownership holdings.

Table 3. Percent Distribution of 1998 Agricultural Real Estate Transactions by Seller Type, by Agricultural Statistics District in Nebraska.

Agricultural Statistics District	Type of Seller				
	Active Farmer/Rancher	Quitting Farmer/Rancher	Estate	Nonfarmer	Other
	Percent				
Northwest	19	30	27	16	8
North	32	27	14	27	0
Northeast	10	23	28	38	1
Central	15	25	30	26	4
East	9	14	36	40	1
Southwest	11	36	27	26	0
South	13	10	60	10	7
Southeast	20	24	24	28	4
State	14	22	32	30	2

SOURCE: Based on 455 transactions which occurred across Nebraska during 1998 and reported in the 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

On the buyer side of the market, 1998 transactions were heavily weighted toward active farmers/ranchers (Table 4). Only in the North District was there some variation where non-local Nebraska residents and out-of-state buyers played a relatively larger role.

Buyer characteristics observed here for 1998 closely parallel those of recent years. Throughout most of the state, active farmer purchase of agricultural parcels for farm expansion purposes continues to be the major driving force behind local agricultural land markets. Even when economic conditions in production agriculture are poor, the need of land for expansion continues and decisions to buy must be made when opportunity of available land arises. Thus active farmer/rancher buyers continue to be present, albeit with more caution.

The presence of nonlocal Nebraska residents and out-of-state buyers in the agricultural land market has tended to increase somewhat in recent years, and the 1998 pattern was basically stable from the previous year. As previously noted, nonfarmer investor interest, "1031" tax exchanges, and price premiums for non-agricultural purposes were all seen as somewhat positive forces on agricultural land values by 1999 UNL survey reporters. These forces were nearly identical to levels reported a year earlier.

Table 4. Percent Distribution of 1998 Agricultural Real Estate Transactions by Buyer Type, by Agricultural Statistics District in Nebraska.

Agricultural Statistics District	Type of Buyer				
	Active Farmer/Rancher	Local Nonfarmer	Nonlocal Nebraska Resident	Out-of-State Buyer	Other
	Percent				
Northwest	76	8	8	5	3
North	48	9	39	4	0
Northeast	80	6	8	6	0
Central	83	13	0	2	2
East	67	20	8	4	1
Southwest	78	4	4	12	2
South	73	12	7	7	1
Southeast	66	18	4	10	2
State	72	12	9	6	1

SOURCE: Based on 455 transactions which occurred across Nebraska during 1998 and reported in the 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

The reasons behind nonfarmer buyer interests may not be as directly related to the agricultural economy as those of farmer buyers. Factors such as diversification of wealth portfolio, tax management, and nonagricultural uses of the land contribute, in varying degrees, to interests in land acquisition. In fact, in some local markets with particular locational, aesthetic, and

recreational potential, the agricultural use may take on a secondary role. In short, some land parcels move to a new "highest-and-best use" long before they actually transition out of agricultural production. This has important economic implications for a number of reasons, including (1) the future structure of agricultural land ownership and (2) the assessment of agricultural lands for property tax purposes.

The physical and financial characteristics of the 1998 transactions vary widely across the state (Table 5). Grazing land, in relatively large acreage units, transferred with some frequency in the Northwest, North, and Southwest Districts, leading to large average dollar outlays per tract. In contrast, transactions in the eastern third of the state tend to be smaller cropland parcels of 80, 120, and 160 acres but with much higher per-acre values. Wherever the transaction, the price per tract was considerable in 1998, averaging more than $280,000 for the state as a whole.

Irrigated land transactions were frequent in the South, East, and Central Districts, constituting 56 percent, 47 percent, and 34 percent, respectively, of the transferred acreage. In most instances, this represented land parcels that were basically all irrigated.

Table 5. Land Characteristics of 1998 Agricultural Real Estate Transactions, by Agricultural Statistics District in Nebraska.

Agricultural Statistics District	Average Size of Tract	Average Percent Distribution			Average Price	
		Dry Cropland	Irrigated Cropland	Pasture	Per Acre	Per Tract
	- Acres -	- - - - - - - - - Percent - - - - - -			- - - - Dollars - - - - - -	
Northwest	1,991	6	4	90	235	468,100
North	1,119	2	18	80	469	525,000
Northeast	162	71	12	17	1,222	197,900
Central	225	21	34	45	975	219,400
East	142	45	47	8	1,850	262,700
Southwest	854	15	6	79	318	271,300
South	260	10	56	34	1,327	345,100
Southeast	184	49	18	33	1,208	222,300
State	445	18	16	66	640	284,800

SOURCE: Based on 455 transactions which occurred across Nebraska during 1998 and reported in the 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

Of the 455 reported transactions which occurred during 1998, nearly half, (46 percent) were cash purchases by buyers who did not incur any associated debt (Table 6). Despite relatively available mortgage financing and the continuation of favorable interest rates, a sizable portion of the buyer

group had the financial means to opt for a cash purchase instead. In fact, in a number of districts in 1998, cash purchases represented the strong majority of transactions. Clearly, in some of these instances, the buyers were also recent real estate sellers who were employing the "1031" tax exchange provisions of the federal tax code to defer capital gains taxes. But in many other cases, buyers were able to configure very sizable cash amounts from their wealth portfolios apart from any recent real estate sales.

Table 6. Types of Financing Associated with 1998 Agricultural Real Estate Sales, by Agricultural Statistics District in Nebraska.

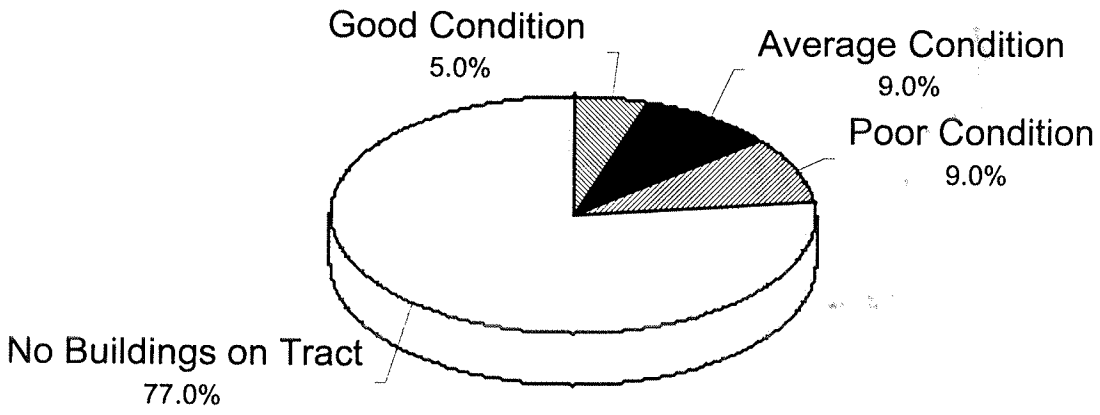
Agricultural Statistics District	Financing of Purchase				
	Cash Purchase	Mortgage	Contract for Deed	Other	Total
	Percent				
Northwest	43	41	8	8	100
North	82	18	0	0	100
Northeast	55	42	2	1	100
Central	33	59	8	0	100
East	26	68	3	3	100
Southwest	49	49	2	0	100
South	63	34	3	0	100
Southeast	64	32	4	0	100
State	46	49	3	2	100

SOURCE: Based on 455 transactions which occurred across Nebraska during 1998 and reported in the 1999 UNL Nebraska Farm Real Estate Market Developments Surveys.

Apart from the sales detail collected, reporters were asked about the presence and condition of building improvements on the real estate property. Of the 1998 sales reported, more than three-fourths (77 percent) had no building improvements on the property at the time of sale (Figure 5). Another 9 percent of the transactions had buildings that were in poor condition (inferring little or no contributory value to the purchase price). In short, the presence of building improvements in the negotiated price may be occurring in less than 15 percent of the agricultural real estate transactions. In essence, today's market is largely an unimproved land parcel market rather than one of land and farmstead that would have characterized the pattern a generation or two ago. Even in the more populated areas around the state's eastern metropolitan areas, where commuter demand for rural farmsteads is high, improved tracts coming onto the market will generally be sold with the farmstead split off and sold separately from the remaining land base.

Despite the mobility of our culture, the buyer side of Nebraska's agricultural real estate market tends to be local. Of the 1998 purchased tracts reported by UNL survey reporters, 60 percent were acquired by buyers living within 5 miles of the tract, and another 25 percent resided within

Figure 5: Presence and Condition of Buildings on Purchased Farmland Tracts in Nebraska, 1998.*



*SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

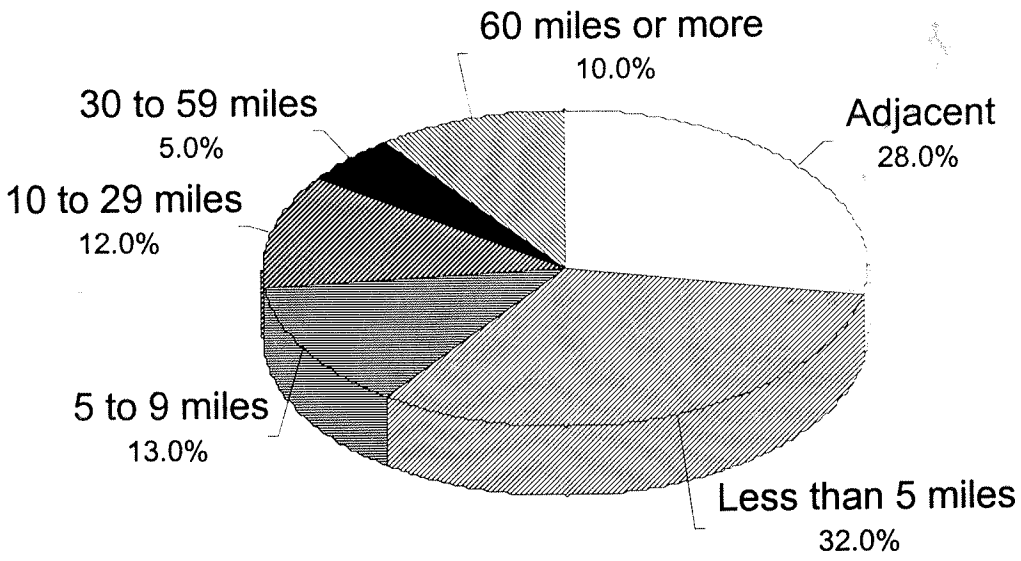
5 to 30 miles (Figure 6). This is partially explained by the fact that the majority of buyers are active farmers purchasing add-on parcels to an existing operation and, consequently, locational proximity tends to be of economic importance. Also, potential buyers may be more knowledgeable about the land characteristics nearby as well as the nature of the local market, thus they are willing to knowledgeably outbid non-local buyers.

The 1999 Cash Rental Market for Agricultural Land

As part of the UNL real estate market development survey series, survey reporters provide their estimates of current cash rental rates for the various land classes in their localities. The 1999 reported cash rental rates are presented in Table 7. In addition to averages, reporters also provide the ranges in rates around those averages which reflect differing productivity levels of land parcels within the classes.

Overall, the reported 1999 rental rates were down somewhat from year-earlier levels (for time series comparisons, refer to Appendix Table 7). For dryland cropland, the 1999 per acre rates were generally off 2 to 5 percent across the state with the exception of the Northeast where the rates remained unchanged. Overall, rates on gravity irrigated land were down about 4 percent from 1998 levels, with regional declines ranging from 2 percent in the East to 7 percent in the Northwest and Southeast Districts. For center pivot irrigated land (on which the landowner owns the full irrigation system) 1999 per acre rates were off about 3 percent from year-earlier levels; but the variation among regions ranged from no change in the East to 5 percent declines in the Northwest and North Districts.

Figure 6: Location of Buyer Residence from Purchased Farmland Tracts in Nebraska, 1998.*



*SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

It is noteworthy that cash rental rates on center pivot land typically are higher than rates on gravity irrigated land. In 1999, this is true throughout the state, with center pivot cash rental rates averaging about 7 percent higher than gravity rates. The exception is in the Central District where distinct differences in land productivity exist between sub-region areas predominantly gravity irrigated in the Platte Valley and those areas in the southern part of the Sandhills that are center pivot irrigated. A decade ago, there was basically no difference in cash rental rates between the two irrigation types in most areas of the state. But with the increasing understanding of the labor savings and other key management advantages associated with center pivot technology, the rental market has responded accordingly. As a consequence, highest reported cash rents in 1999 are typically for center pivot tracts.

Pasture rental rates for 1999, on a per acre basis, were generally stable to slightly below the reported levels of a year earlier. Likewise, on an AUM (animal unit month) basis the change was relatively minor throughout most of the state. Despite the fact that economic recovery in the state's cattle economy has been painfully slow, cattle numbers in Nebraska have remained fairly stable. In turn, the demand for forage has remained relatively strong–keeping range and pasture rental rates stable. Also, the movement of cattle into the state during the range season by out-of-state owners in recent years has contributed to the rental demand for forage land.

Table 7. Reported Cash Rental Rates for Various Types of Nebraska Farmland: 1999 Averages and Ranges by Agricultural Statistics District. [a]

Type of Land and Year	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
	Dollars Per Acre							
Dryland Cropland:								
Average	21	38	79	51	85	30	49	67
Range:								
High	26	48	96	65	106	37	60	83
Low	16	30	62	40	69	24	40	53
Gravity Irrigated Cropland:								
Average	85	102	111	123	133	98	130	119
Range:								
High	114	119	129	144	154	115	151	144
Low	67	84	99	102	111	82	110	99
Center Pivot Irrigated Cropland:								
Average	90	109	122	124	143	110	136	127
Range:								
High	117	127	144	143	166	128	154	153
Low	72	86	102	101	124	93	116	107
Dryland Alfalfa:								
Average	b	b	80	54	86	b	b	64
Range:								
High	b	b	100	68	99	b	b	77
Low	b	b	66	42	69	b	b	45
Irrigated Alfalfa:								
Average	b	b	112	108	115	b	b	b
Range:								
High	b	b	129	127	134	b	b	b
Low	b	b	98	89	98	b	b	b
Other Hayland:								
Average	b	b	48	38	48	b	b	b
Range:								
High	b	b	59	47	62	b	b	b
Low	b	b	34	27	37	b	b	b
Pasture:								
Average	7	12	31	21	29	11	20	23
Range:								
High	9	16	44	27	39	15	26	28
Low	5	9	22	16	19	9	15	16
	Dollars Per Animal Unit Month [c]							
Average	16.70	23.00	21.60	23.25	21.90	23.25	22.00	20.40
Range:								
High	21.00	27.70	27.75	28.80	26.25	27.75	26.35	24.25
Low	13.55	19.85	17.30	18.45	18.70	19.50	17.00	16.25

[a] SOURCE: Reporters' estimated cash rental rates (both averages and ranges) from the 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

[b] Insufficient number of reports.

[c] Animal Unit Month (AUM) refers to sufficient forage capacity to sustain an animal unit (1,000 lb. cow with calf at side or equivalent) for one month during the normal range season.

Rates of Return on Agricultural Land

Each year, UNL survey reporters are asked to estimate the average percentage net rate of return on agricultural land investment given current values. This rate is the annual expected per acre income return to the land owner (after property taxes and all other owner-related expenses are subtracted) divided by current average value per acre. In the vernacular of the financial world this is ROA (return on investment). In the terminology of agricultural real estate appraisal, this is referred to as the market-derived capitalization rate. Any capital gains (or losses) accruing to the real estate parcel are not included in this estimate. Survey reporters provide this estimate for the three general land classes: irrigated cropland, dryland cropland, and grassland.

Estimated annual net rates of return for the current decade are presented in Table 8. The 1999 rates are consistently down from year-earlier levels for both irrigated and dryland cropland throughout the state, and down as well for grazing land in most of the regions. On average, the state-wide decline is about 8 percent, bringing current rates of return on agricultural land to the lowest levels of the decade.

Over the past 10 years, land values have appreciated at rates faster than land earnings, leading to a gradual decline in net rate of return. With serious income shortfalls across production agriculture in 1998 and into 1999, this pattern of decline has only compounded.

One implication of the above is that recent buyers have been willing to accept relatively low rates of return on agricultural land investment, either by factoring other perceived benefits from land ownership into the purchase price, or anticipating improved agricultural earnings in the future. So long as these forces are present, the earnings-to-price ratio can fall to levels below the opportunity costs (returns possible from alternative investments) of the buyer. However, agricultural land is still basically an income-producing asset, with value tied closely to anticipated earnings. At some point, it is reasonable to expect that current (and anticipated) land earnings simply do not support the market values and a downward value adjustment will ensue. Clearly, this is the logic reflected in comments of UNL survey reporters who expect further land value declines if agricultural income does not improve measurably in 1999.

While declines in rates of return were pervasive across the state, the current levels show some variation from region to region. As previously noted, estimated net rates of return in the Northeast District are among the highest across the land classes. A succession of several good crop years in the Northeast in combination with market demand driven primarily by active farmer-buyers has tended to keep the earnings-to-price relationships somewhat higher than in other parts of the state.

In contrast, the rate of return to irrigated land in the East was a full 1.3 percentage points below that of the Northeast, while estimated dryland returns in the Southwest were 1.5 percentage points below the Northeast level. It is these areas of relatively low current net rates of return where existing land value levels may be particularly sensitive to any continuing agricultural income shortfalls into the months ahead.

Table 8. Estimated Annual Net Rates of Return by Type of Land and Agricultural Statistics District, 1990-1999.[ab]

Type of Land and Year	Agricultural Statistics District								State Ave
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	
	Percent								
Irrigated Land:									
1990	8.3	9.3	6.9	6.8	6.7	6.3	6.3	6.0	7.1
1991	8.7	8.0	6.8	6.5	6.4	6.4	6.2	5.9	6.9
1992	6.8	6.5	6.6	6.6	6.0	6.5	6.0	6.1	6.4
1993	6.6	6.0	6.5	6.1	5.7	6.5	6.5	6.0	6.2
1994	6.9	6.5	6.3	6.3	5.6	6.2	5.7	5.7	6.2
1995	6.6	6.8	6.5	5.9	5.3	5.9	6.0	5.0	6.0
1996	6.7	6.3	6.9	5.8	5.2	6.5	6.2	5.4	6.1
1997	7.2	7.0	7.0	6.0	5.3	6.7	6.3	5.7	6.4
1998	6.7	6.7	6.0	5.8	5.0	6.6	5.7	5.4	6.0
1999	6.0	5.9	5.9	5.3	4.6	6.1	4.9	5.0	5.5
Dryland Cropland:									
1990	6.2	6.3	5.9	6.4	5.9	4.7	6.1	6.3	6.0
1991	5.9	5.0	6.0	5.9	5.8	4.7	6.1	5.8	5.7
1992	4.8	5.0	5.6	5.9	5.7	5.6	5.2	6.1	5.5
1993	5.0	4.3	5.8	5.7	5.3	5.3	6.1	5.2	5.4
1994	4.5	5.2	6.0	5.4	5.2	5.2	5.3	5.4	5.3
1995	4.2	6.0	6.2	5.3	5.2	5.1	5.4	5.0	5.3
1996	4.1	5.0	6.3	5.6	5.0	5.3	5.5	5.2	5.3
1997	5.1	5.8	6.4	5.6	5.3	5.3	5.4	5.4	5.5
1998	4.5	5.5	5.8	5.3	4.8	4.8	5.4	5.0	5.1
1999	4.3	4.9	5.4	5.1	4.5	3.9	4.5	4.9	4.7
Grazing Land:									
1990	4.0	5.8	4.6	4.9	5.0	4.5	5.4	5.0	4.9
1991	5.5	5.9	5.4	5.0	5.3	5.8	5.5	5.5	5.4
1992	4.0	5.3	4.9	4.6	4.4	5.1	5.0	5.0	4.8
1993	4.3	4.6	5.0	4.6	4.3	4.6	4.5	4.6	4.6
1994	4.7	4.5	5.1	4.4	4.3	4.7	4.1	4.5	4.5
1995	3.7	4.7	4.9	4.0	4.2	4.5	4.2	4.0	4.3
1996	3.8	4.3	4.9	4.3	4.0	4.3	3.8	4.1	4.2
1997	3.6	4.3	4.9	4.5	4.0	4.0	3.6	4.2	4.1
1998	3.4	4.2	4.6	4.1	3.9	4.2	4.0	3.8	4.0
1999	3.1	3.5	4.4	4.2	3.6	3.2	3.6	3.9	3.7

[a] SOURCE: UNL Nebraska Farm Real Estate Market Developments Surveys.
[b] Reporters' estimates of current annual net percentage rates of return given current values. Real estate appraisers refer to this percentage as the market-derived capitalization rate.

As a follow up to reporters' estimates of net rates of return in Table 8, further analysis of typical net returns has been done for selective land types in the various regions of the state (Table 9). Using the average current market values and cash rents for the area, typical landowner expenses are subtracted from the latter to arrive at an estimate of net dollar returns per acre (row 8). Dividing this estimate by the per-acre value (row 1) yields an estimated percentage rate of return (row 9). The analysis is then extended to consider the associated debt-servicing capacity which these land returns generate under two different mortgage scenarios.

The regional patterns in Table 9 are similar to those of the previous table. For example, dryland cropland returns in the Northeast are the highest among the regions. However, even with a return of 6.0 percent, the debt-servicing capacity of those dryland returns is only 53 percent to 59 percent of conventional mortgage financing currently available. In other words, a down-payment of no less than 40 percent would be needed in order for the current land returns to service the mortgage payments. In short, the land (earnings) will not pay for itself.

In other areas of the state where net rates of return are considerably lower, the debt-servicing potential is more limited, in some instances falling into the 30 percent range even with current interest rates that are historically low.

One substantial variation between estimated returns in Tables 8 and 9 is for irrigated land. The disparity is primarily due to the depreciation costs assigned with irrigation in the analysis in Table 9. In those cases where the landowner owns the entire irrigation system, the annual fixed costs of depreciation incurred as an owner can easily be $20 to $30 per acre. But, because these are not regular, out-of-pocket costs, market participants may not always account for them in a rate-of-return estimate. For a correct measure of an investment having depreciable components, this should be included. And as the detailed analysis here suggests, this inclusion tends to make the calculated average returns to irrigated land considerably lower than first thought.

One final approach to looking at patterns of returns to agricultural land is comparing the gross average cash rental rates against the associated market value of the land. This yields a gross rent-to-value ratio which can be used for comparative analysis across geographic areas as well as over time. Because UNL survey reporters provide estimates of the associated land value concurrent with their reported cash rental rates, the gross rent-to-value ratio can be determined directly. These rates, associated values, and ratios for 1999 are presented in Table 10.

As expected, highest gross rent-to-value ratios are associated with irrigated cropland, where the ownership costs are more extensive. In some areas of the state, the ratios on irrigated land are more than 9 percent. Given annual ownership costs that can easily total 3 to 4 percent of current market value, annual net returns may still fall in the 5 to 6 percent range, even with these gross rent levels.

Table 9: Analysis of Typical Net Returns For Selected Land Types and Locations Using Typical Cash Rental Rates, 1999. [a/]

Row	Item	Northeast NE Dryland Cropland		Northeast NE Pivot Irrigated Cropland		Eastern NE Dryland Cropland		Eastern NE Gravity Irrigated Cropland (from well)		Southeast NE Dryland Cropland	
1.	Current purchase price per acre	$975.00		$1,750.00		$1,450.00		$2,250.00		$955.00	
2.	Annual cash rent per acre (gross)		$79.00		$122.00		$85.00		$133.00		$67.00
3.	Gross Rent-to-Value ratio	8.1%		7.0%		5.9%		5.9%		7.0%	
	Annual owner expenses (per acre)										
4.	Real Estate Taxes[c]	$16.10		$28.90		$23.90		$37.15		$15.75	
5.	Irrigation Costs[d]	—		$27.00		--		$21.00		--	
6.	Incidental Costs	$4.00		$5.00		$4.00		$5.00		$4.00	
7.	Total Owner Costs		$20.10		$60.90		$27.90		$63.15		$19.75
8.	Annual net returns per acre (before income taxes)		$58.90		$61.10		$57.10		$69.85		$47.25
9.	Percentage rate of return to land (before income taxes)		6.0%		3.5%		3.9%		3.1%		4.9%
10.	Mortgage amount per acre which could be serviced by the net returns assuming:										
	15 year amortized loan at 7.5% interest		$519.90		$539.35		$504.00		$616.60		$417.10
	% of purchase price		53%		31%		35%		27%		44%
	20 year amortized loan at 8.25% interest		$578.30		$599.90		$560.60		$685.80		$463.90
	% of purchase price		59%		34%		39%		30%		49%

(See footnotes at end of table)

Table 9: (continued)

Row	Item	Southwest NE Dryland Cropland	Southern NE Pivot Irrigated Cropland[b]	Northwest NE Gravity Irrigated Cropland (from well)	Northern NE Pivot Irrigated Cropland (from well)[b]	Northern NE Sandhills Rangeland
1.	Current purchase price per acre	$425.00	$1,975.00	$900.00	$1,125.00	$190.00
2.	Annual cash rent per acre (gross)	$30.00	$135.00	$85.00	$109.00	$11.75
3.	Gross Rent-to-value ratio	7.1%	6.8%	9.4%	9.7%	6.2%
	Annual owner expenses (per acre)					
4.	Real Estate Taxes[c]	$7.00	$32.60	$14.85	$185.50	$2.75
5.	Irrigation Costs[d]	--	$27.00	$21.00	$27.00	--
6.	Incidental Costs	$2.00	$5.00	$4.00	$5.00	$1.00
7.	Total Owner Costs	$9.00	$64.60	$39.85	$50.55	$3.75
8.	Annual net returns per acre (before income taxes)	$21.00	$70.40	$45.15	$58.45	
9.	Percentage rate of return to land (before income taxes)	4.9%	3.6%	5.0%	5.2%	4.2%
10.	Mortgage amount per acre which could be serviced by the net returns assuming:					
	15 year amortized loan at 7.5% interest	$185.55	$621.45	$398.55	$515.95	$70.60
	% of purchase price	44%	31%	35%	46%	37%
	20 year amortized loan at 8.25% interest	$206.20	$691.20	$443.30	$573.85	$78.55
	% of purchase price	49%	35%	49%	51%	41%

a/ Current purchase prices and cash rents based upon the UNL 1998 Nebraska Farm Real Estate Market Survey.
b/ Value of pivot of approximately $150.00 per acre including purchase price.
c/ Real estate taxes assumed to be 1.75 percent of purchase price for all cropland, and 1.5 percent of purchase price for all rangeland.
d/ Estimated fixed costs of depreciation and insurance on irrigation equipment, based upon *Estimated Irrigation Costs,* 1995, Nebraska Cooperative Extension CC371 and *Nebraska Crop Budgets 1999,* EC99-872-S.

Table 10. Reported Cash Rental Rates, Associated Estimates of Value, and Gross Rent as a Percent of Value by Type of Land and Agricultural Statistics District, 1999. [a]

Agricultural Statistics District and Type of Land	Gross Cash Rent Per Acre	Associated Value Per Acre [b]	Gross Rent to Value
	---------- Dollars ----------		--- Percent ---
Northwest:			
Dryland Cropland	21	330	6.4
Gravity Irrigated Cropland	85	905	9.5
Center Pivot Irrigated Cropland [c]	90	915	9.9
Pastureland	7	130	5.4
North:			
Dryland Cropland	38	425	9.0
Gravity Irrigated Cropland	102	1,065	9.6
Center Pivot Irrigated Cropland [c]	109	1,100	9.9
Pastureland	12	210	5.8
Northeast:			
Dryland Cropland	79	1,115	7.1
Gravity Irrigated Cropland	111	1,600	7.0
Center Pivot Irrigated Cropland [c]	122	1,700	7.2
Dryland Alfalfa	80	1,155	7.0
Irrigated Alfalfa	112	1,665	6.8
Other Hayland	48	715	6.8
Pastureland	31	495	6.3
Central:			
Dryland Cropland	51	670	7.7
Gravity Irrigated Cropland	123	1,840	6.7
Center Pivot Irrigated Cropland [c]	124	1,700	7.3
Dryland Alfalfa	54	695	7.8
Irrigated Alfalfa	108	1,480	7.7
Other Hayland	38	485	7.9
Pastureland	21	365	5.8
East:			
Dryland Cropland	85	1,540	5.6
Gravity Irrigated Cropland	133	2,235	6.0
Center Pivot Irrigated Cropland [c]	143	2,375	6.1
Dryland Alfalfa	86	1,525	5.7
Irrigated Alfalfa	119	2,065	5.8
Other Hayland	48	855	5.7
Pastureland	29	595	4.9
Southwest:			
Dryland Cropland	30	445	6.8
Gravity Irrigated Cropland	98	1,305	7.5
Center Pivot Irrigated Cropland [c]	110	1,210	9.1
Pastureland	11	190	5.8
South:			
Dryland Cropland	49	885	5.6
Gravity Irrigated Cropland	130	1,925	6.8
Center Pivot Irrigated Cropland [c]	136	1, 910	7.2
Pastureland	20	350	5.7
Southeast			
Dryland Cropland	67	1,040	6.5
Gravity Irrigated Cropland	119	1,640	7.3
Center Pivot Irrigated Cropland [c]	127	1,725	7.4
Dryland Alfalfa	64	890	7.2
Pastureland	23	475	4.9

[a] SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.
[b] Average values given by reporters for the land on which their cash rent estimates were made.
[c] Value of the pivot included in the value per acre.

For non-irrigated land types under cash rental arrangements, annual ownership costs may largely be real estate taxes which typically fall in the range of 1.25 to 1.75 percent of market value. Consequently, net returns for non-irrigated land will tend to be from 1.5 to 2.0 percentage points below the reported gross rent-to-value ratios when all ownership costs are included.

Gross rent-to-value ratios provide some perspective of the relationship of current cash rents to current values, and therefore can be useful in arriving at a reasonable level of cash rent to assign to a particular parcel. In other words, if one has a realistic measure of current value, then multiplying that value by the appropriate ratio will give a cash rent level that will tend to reflect the current rental market conditions in that area. For example, if a dryland cropland parcel of above-average quality in southeast Nebraska has an estimated current market value of $1,255 per acre, then the appropriate rent implied from the gross rent-to-value ratio is about $82 per acre ($1,255 x .065 = $81.58). This rent level mirrors closely the high end of reported cash rents for the Southeast District in Table 7.

Irrigation Technology and the Impact on Values and Rental Rates

Throughout the 22-year UNL farm real estate market development series, value estimates for irrigated land have been classified into two groups: gravity and center-pivot. When the series started, the highest-valued land was almost always the gravity irrigated land class, which, by nature of slope and location, was comprised mainly of Class I soils. Center pivot irrigated land was typically much different. In fact, it was precisely the attributes of this technology which made irrigation possible on the hillier, poorer quality land. Consequently, average value estimates by sub-state region tended to show rather large per-acre value disparities between gravity irrigated and center pivot irrigated land, with the latter being much lower due to the inclusion of more diverse soil types.

Over time, the value disparities within sub-state areas have tended to decline. One reason is that center pivot technology is no longer relegated to hilly land, but is being used with increased frequency on high quality land that had previously been gravity irrigated. Secondly, and somewhat related, is the realization that center pivot is becoming the irrigation system of choice. Because of the labor savings, efficiency gains of water and energy use, and the enhanced flexibility for precision application of inputs, agricultural producers are opting to invest in this technology. The relatively higher 1999 cash rental rates for center pivot land verses gravity irrigated land throughout much of the state is indicative of these factors.

In 1978, 40 percent of Nebraska's irrigated acreage was under center pivot with nearly all the remainder in gravity systems. Currently, more than 55 percent of the state's irrigated acreage is under center pivot irrigation (Source: Irrigation Age Magazine). Virtually all new land acreage brought into irrigation over the past two decades has been center pivot development. Moreover, gravity to center pivot conversion is proceeding rapidly, exceeding more than 700,000 acres over the past 10 years. As one UNL reporter remarked, "within 6 months of a gravity irrigated tract changing ownership, it will sprout a pivot."

Just how sensitive is the agricultural land market to these trends in irrigation practices? Is there a center pivot premium? And if so, how much?

In order to get a clearer measure of the market's assessment of irrigation technology alternatives, UNL reporters were asked to respond to the following question: "Would a gravity irrigated tract of land be discounted in value when sold in today's market if potential conversion to center pivot technology would be prevented by physical features?" This question essentially neutralizes land quality differences and focuses upon the option of converting to center pivot technology. Table 11 presents their response to this question. The vast majority of survey respondents (77 percent) agreed that, indeed, there would be a value discount if pivot conversion were precluded by physical limitations. Only a small percentage of the reporters believed there would be no price discount.

For those who answered "yes" to the above question, they were then asked, "What dollar per acre discount would apply?" Their responses, when combined with those who reported no change, yielded a state average discount of $193 per acre. The range in discount levels was from a low of $100 per acre in the North District to a high of $232 per acre in the East District. Relative to average per acre price for gravity irrigated land in early 1999, the discount averaged about 11 percent of going market value. In other words, for gravity irrigated land valued at $2,000 per acre and capable of being converted to center pivot technology, the option value of that conversion potential would be an estimated $220 per acre ($2,000 x .11 = $220).

Table 11. Impact on Gravity Irrigated Land Values when Physical Features Preclude Conversion to Center Pivot Technology, by Agricultural Statistics District in Nebraska, 1999.*

Agricultural Statistics District	Is there a discount in value when conversion to center pivot technology is prevented?			What $ per acre discount would apply?
	Yes	No	Don't Know	
	---------- Percent ----------			Ave. $ per ac.
Northwest	78	0	22	207
North	50	17	33	100
Northeast	92	0	8	190
Central	72	21	7	163
East	67	10	23	232
Southwest	77	0	23	206
South	91	0	9	208
Southeast	89	11	0	167
State	76	8	16	193

* SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.

This option value described above essentially confirms the fact that there is a center pivot premium operating in today's market for irrigated land. Market participants are factoring this premium into irrigated real estate values in Nebraska. It represents the perceived economic advantages of this irrigation technology over gravity systems capitalized into the value of the land.

So, for land that is already under center pivot irrigation, the value differential between that and comparable land under gravity irrigation would reflect two components, (1) the estimated current depreciated value of the center pivot system on the property and (2) the center pivot premium which, in some parts of the state, exceeds $200 per acre.

Survey Reporters' Expectations for 1999

In February, 1999, UNL survey reporters were asked to look ahead and share their expectations for the agricultural real estate market in 1999. For reasons already discussed, these reporters at year's beginning tended to be expecting some changes in market activity and value volatility over the course of the year. Nearly half of the reporters anticipated increased selling activity in 1999 relative to previous year levels (Table 12). The level of increase expected by these reporters was approaching 10 percent. Most of the remaining reporters were anticipating little or no change in the number of offerings on the market in 1999. Only a few reporters anticipated decreased activity during the year. Based upon reporter comments, many saw greater market activity as a result of economic stress forcing more land onto the market.

Table 12: Reporters' Beginning-Year Expectations of Market Activity for Agricultural Land During 1999 by Agricultural Statistics District in Nebraska. [a]

Agricultural Statistics District	Relative to 1998, the number of agricultural land tracts offered for sale in 1999 will:		
	Increase [b]	Decrease [c]	Stay the Same
	Percent		
Northwest	50	10	40
North	50	0	50
Northeast	47	6	47
Central	40	20	40
East	45	10	45
Southwest	58	9	33
South	46	0	54
Southeast	40	7	53
State	44	9	47

[a] SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.
[b] For those expecting an increase, the average expected increase was 9.6 percent.
[c] For those expecting a decrease, the average expected decrease was 11.8 percent.

As for market value changes during 1999, just over half of the reporters state-wide were expecting decreases in agricultural land values. The average expected decrease was 7.5 percent (Table 13). Most of the other reporters expected value stability, while a small percentage anticipated some increases in value during 1999.

The expectations for the year ahead represent a distinct change from those of previous years. For example, in early 1998, 60 percent of the reporters expected value increases during 1998 with an expected average increase of 6 percent. Obviously, conditions in 1998 did not come close to their beginning year expectations, and, consequently, reporters in early 1999 were definitely reassessing their expectations for the coming months, taking on a relatively cautious outlook.

Table 13: Reporters' Beginning-Year Expectations of Agricultural Land Value Changes During 1999, by Agricultural Statistics District in Nebraska. [a]

Agricultural Statistics District	Relative to beginning 1999 levels, the average value of agricultural land will:		
	Increase [b]	Decrease [c]	Stay the Same
	---------- Percent ----------		
Northwest	10	60	30
North	11	54	33
Northeast	5	42	53
Central	0	73	27
East	8	51	41
Southwest	16	42	42
South	0	64	36
Southeast	7	60	33
State	8	54	38

[a] SOURCE: 1999 UNL Nebraska Farm Real Estate Market Developments Survey.
[b] For those expecting an increase, the average expected increase was 5.7 percent.
[c] For those expecting a decrease, the average expected decrease was 7.5 percent.

APPENDIX

Appendix Table 1. Farm Real Estate Values in Nebraska, USDA Historical Series, 1860-1998.[a]

Year	Number of Farms	Land in Farms	Value of Land & Buildings			Building Value
			Per Acre	Per Farm	Total Value	
	Thousand	Million Acres	Dollars	Thousand Dollars	Million Dollars	Million Dollars
1860	2.8	1.0	6	1.4	6	
1870	12.3	[1] 2.1	12	2.0	24	
1880	63.4	9.9	11	1.7	106	
1890	113.6	21.6	19	3.5	402	
1900	121.5	29.9	19	4.8	578	91
1910	129.7	38.6	47	14.0	1,813	199
1911	129.2	39.0	48	14.4	1,864	
1912	128.8	39.2	49	14.9	1,919	
1913	128.2	39.5	50	15.4	1,974	
1914	127.5	39.8	51	15.9	2,027	
1915	126.9	40.3	50	15.9	2,017	
1916	126.3	40.9	51	16.5	2,084	
1917	125.8	41.5	54	17.8	2,240	
1918	125.2	41.8[1]	62	20.7	2,591	
1919	123.1	41.9	71	23.8	2,978	
1920	124.6	42.2	88	29.8	3,712	382
1921	125.1	41.9	82	27.5	3,439	
1922	137.1	41.9	71	21.7	2,974	
1923	126.6	42.1	68	22.6	2,860	
1924	127.3	41.8	63	20.7	2,635	398
1925	127.5	42.1	60	19.8	2,524	
1926	128.2	42.5	60	19.9	2,552	
1927	128.5	43.2	58	19.5	2,505	
1928	128.6	44.0	57	19.5	2,508	
1929	128.9	44.3	57	19.6	2,526	
1930	129.3	44.6	56	19.3	2,495	447
1931	129.9	45.0	52	18.0	2,338	
1932	130.8	45.8	44	15.4	2,015	
1933	132.0	46.0	35	12.2	1,609	
1934	133.2	46.4	35	12.2	1,625	
1935	134.0	46.9	34	11.9	1,594	341
1936	131.2	46.7	34	12.1	1,587	
1937	128.5	47.4	32	11.8	1,516	
1938	125.8	47.4	30	11.3	1,421	
1939	123.6	46.8	28	10.6	1,310	
1940	121.1	47.4	24	9.4	1,138	257
1941	119.2	48.2	22	8.9	1,061	
1942	116.9	48.2	24	9.9	1,157	
1943	115.6	47.5	27	11.1	1,283	
1944	113.7	47.9	33	13.9	1,580	
1945	111.4	47.6	37	15.8	1,760	382
1946	111.3	47.4	42	17.9	1,992	
1947	110.1	48.0	47	20.5	2,257	
1948	109.0	47.3	56	24.3	2,649	
1949	108.0	47.2	62	27.1	2,927	
1950	109.0	48.4	58	25.6	2,789	
1951	107.0	48.4	66	29.8	3,192	562
1952	105.0	48.3	72	33.1	3,477	605
1953	104.0	48.3	75	34.7	3,610	621
1954	103.0	48.3	70	32.8	3,386	589
1955	102.0	48.3	73	34.5	3,534	645

See Footnote at end of Table.

Appendix Table 1. Farm Real Estate Values in Nebraska, USDA Historical Series, 1860-1998.[a]

Year	Number of Farms	Land in Farms	Value of Land & Buildings			Building Value
			Per Acre	Per Farm	Total Value	
	Thousand	Million Acres	Dollars	Thousand Dollars	Million Dollars	Million Dollars
1956	101.0	48.3	73	34.9	3,523	719
1957	98.0	48.3	72	35.8	3,501	606
1958	96.0	48.3	79	40.0	3,839	572
1959	94.0	48.3	86	43.9	4,131	677
1960	93.0	48.2	89	46.3	4,308	763
1961	90.0	48.2	90	48.2	4,341	790
1962	88.0	48.2	95	52.2	4,598	860
1963	86.0	48.1	97	54.0	4,647	911
1964	84.0	48.2	105	60.0	5,055	1,072
1965	82.0	48.2	111	65.3	5,352	1,258
1966	80.0	48.2	120	72.6	5,805	1,283
1967	78.0	48.2	132	81.4	6,348	1,143
1968	76.0	48.2	143	90.5	6,882	1,136
1969	74.0	48.2	150	97.8	7,238	1,021
1970	73.0	48.1	154	101.5	7,407	941
1971	72.0	48.1	157	104.9	7,552	853
1972	71.0	48.1	170	115.2	8,177	932
1973	70.0	48.1	193	132.6	9,283	1,012
1974	70.0	48.1	242	166.3	11,640	1,152
1975	67.0	47.9	282	201.6	13,508	1,229
1976	67.0	47.9	363	259.2	17,366	1,546
1977	66.0	47.8	420	304.1	20,070	1,806
1978	66.0	47.8	412	298.5	19,702	1,832
1979	65.0	47.7	525	385.3	25,043	2,204
1980	65.0	47.7	635	466.0	30,289	2,547
1981	65.0	47.7	729	535.0	34,773	2,851
1982	63.0	47.5	730	550.4	34,675	2,809
1983	62.0	47.4	701	535.9	33,227	2,758
1984	61.0	47.2	645	499.1	30,444	2,710
1985	60.0	47.2	485	381.9	22,911	2,474
1986	59.0	47.2	416	332.7	19,629	2,532
1987	59.0	47.2	400	320.1	18,885	2,682
1988	58.0	47.1	457	371.1	21,525	3,186
1989	57.0	47.1	511	422.2	24,068	3,451
1990	57.0	47.1	524	433.0	24,680	3,186
1991	56.0	47.1	517	434.8	24,350	2,978
1992	56.0	47.1	517	434.8	24,350	3,026
1993	55.0	47.1	514	440.2	24,209	3,061
1994	55.0	47.1	562	481.5	26,485	3,670
1995	56.0	47.0	580	486.8	27,260	4,280
1996	56.0	47.0	610	512.0	28,670	4,473
1997	55.0	47.0	620	530.0	29,140	4,546
1998	55.0	47.0	645	551.2	30,315	4,699
1999	55.0	47.0	660	564.0	31,020	4,808

[a] SOURCE: Farm Real Estate Historical Series Data: 1950-92, USDA, Economic Research Service, Sta. Bul. No. 855, May 1993 and earlier reports as well as recent issues and Internet releases annually by Economic Research Service, U.S. Department of Agriculture.

Appendix Table 2. Deflated USDA Farmland Values and Percent Changes for Nebraska, 1930 to 1999.[a]

Year	USDA Average Value/Ac. for Nebraska	1st Quarter GDP Price Deflator (1992 = 100)	Deflated Average Value/Ac.[b]	Year-to-Year Change Deflated Farmland Values[d]
1930	56	10.83	517	
1931	52	9.84	528	2.1
1932	44	8.75	503	-4.7
1933	35	8.57	408	-18.9
1934	35	9.30	376	-7.8
1935	34	9.48	359	-4.5
1936	34	9.57	355	-1.1
1937	32	10.02	319	-10.1
1938	30	9.75	308	-3.4
1939	28	9.66	290	-5.8
1940	24	9.93	242	-16.6
1941	22	10.74	205	-15.3
1942	24	11.82	203	-1.0
1943	27	12.36	219	7.9
1944	33	12.635	261	19.2
1945	37	12.91	287	10.0
1946	42	14.98	280	-2.4
1947	47	16.97	277	-1.1
1948	56	18.14	309	11.6
1949	62	17.96	345	11.7
1950	58	18.32	317	8.1
1951	66	19.49	339	6.9
1952	72	19.765	364	7.4
1953	75	20.04	374	2.8
1954	70	20.31	345	-7.8
1955	73	20.76	352	-2.0
1956	73	21.39	341	-3.1
1957	72	22.20	324	-5.0
1958	79	22.47	352	8.6
1959	86	22.92	375	6.5
1960	89	23.13	385	2.7
1961	90	23.45	384	-0.3
1962	95	[2]23.75	400	4.2
1963	97	24.00	404	1.0
1964	105	24.35	431	6.7
1965	111	24.77	448	3.9
1966	120	25.32	474	5.8
1967	132	26.14	505	6.5
1968	143	27.21	526	4.2
1969	150	28.39	528	0.2

See Footnotes at end of Table.

Appendix Table 2. Deflated USDA Farmland Values and Percent Changes for Nebraska, 1930 to 1999.[a]

Year	USDA Average Value/Ac. for Nebraska	1st Quarter GDP Price Deflator (1992 = 100)	Deflated Average Value/Ac.[b]	Year-to-Year Change Deflated Farmland Values[d]
1970	154	29.94	514	-2.6
1971	156	31.50	495	-3.7
1972	171	33.02	518	4.7
1973	193	34.36	562	8.5
1974	246	37.01	665	18.3
1975	282	41.05	687	3.3
1976	363	43.69	831	21.0
1977	420	46.32	907	9.2
1978	412	49.42	834	-8.0
1979	525	53.51	981	17.6
1980	635	58.18	1091	11.2
1981	729	64.15	1136	4.1
1982	730	68.86	1060	-6.7
1983	701	72.08	973	-8.2
1984	645	75.02	860	-11.6
1985	485	77.63	625	-27.3
1986	416	79.81	521	-16.6
1987	400	82.09	487	-6.5
1988	457	84.67	540	10.9
1989	511	88.45	578	7.0
1990	524	92.00	570	-1.4
1991	517	96.27	537	-5.8
1992	517	99.13	522	-2.8
1993	514	101.84	505	-3.3
1994	562	104.13	540	6.9
1995	580	106.75	543	0.6
1996	610	108.91	560	3.1
1997	620	111.00	559	-0.2
1998	645	112.32	574	2.7
1999[c]	660	113.45	582	1.4

[a] Revised from series reported in earlier reports. Refers to year ending March 1 for years prior to 1976; year ending February 1 for years 1976-1981; year ending April 1 for years 1982-1985; year ending February 1, 1986-1989; year ending January 1, 1990-1994; mid-year 1995-1997, and year ending January 1, 1999.

[b] Computed by dividing the average value per acre by the 1st Quarter GDP Price Deflator and multiplying by 100.

[c] Preliminary estimate.

[d] A positive value entry in this column represents a real increase in asset value for the year (i.e., the rate of land value appreciation exceeded the general rate of inflation for the U.S. economy). Conversely, a negative value entry represents a real decrease in asset value.

Appendix Table 3. Nominal and Deflated Agricultural Land Values by Selected Types of Land in Nebraska, 1978 to 1999.[a]

Year	Nominal Value/Ac.[a]				1st Quarter GDP Price Deflator (1992 = 100)	Deflated Value/Ac.[b]			
	Dryland Cropland	Center Pivot Irrigated Cropland[c]	Grazing Land (Nontillable)	All Land Average		Dryland Cropland	Center Pivot Irrigated Cropland[c]	Grazing Land (Nontillable)	All Land Average
	Dollars/Ac.					Dollars/Ac.			
1978	492	947	153	500	49.42	996	1,916	310	1,012
1979	602	1,114	186	597	53.51	1,125	2,082	348	1,116
1980	702	1,272	209	695	58.18	1,207	2,186	359	1,195
1981	778	1,341	230	749	64.15	1,213	2,090	359	1,168
1982	742	1,293	227	720	68.86	1,078	1,878	330	1,046
1983	681	1,130	205	642	72.08	945	1,568	284	891
1984	632	1,049	184	588	75.02	842	1,398	245	784
1985	501	833	135	450	77.63	645	1,073	174	580
1986	384	634	98	339	79.81	481	794	123	425
1987	371	580	83	306	82.09	452	707	101	373
1988	416	661	91	346	84.67	491	781	107	409
1989	500	841	123	432	88.45	565	951	139	488
1990	532	935	146	473	92.00	578	1,016	159	514
1991	536	977	159	492	96.27	557	1,015	165	511
1992	551	1,000	166	510	99.13	556	1,009	167	514
1993	573	1,045	172	531	101.84	563	1,026	169	521
1994	608	1,107	183	566	104.13	584	1,063	176	544
1995	623	1,149	192	582	106.75	584	1,076	180	545
1996	656	1,235	189	608	108.91	602	1,134	174	558
1997	706	1,338	202	654	111.00	636	1,205	182	589
1998	767	1,471	224	710	112.32	683	1,310	199	632
1999	749	1,428	219	690	113.45	660	1,259	193	608

[a] February 1st estimates reported in the UNL Nebraska Farm Real Estate Market Developments Surveys.
[b] Computed by dividing the average value per acre by the 1st Quarter Gross Domestic Price (GDP) Deflator and multiplying by 100.
[c] Pivot not included in per acre value.

Appendix Table 4. Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999.[a]

Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	Dollars Per Acre								
Dryland Cropland (No Irrigation Potential)									
1978	289	253	648	319	817	360	468	660	492
1979	317	319	813	397	1,061	387	541	808	602
1980	347	340	920	471	1,296	454	626	971	702
1981	419	346	1,009	519	1,409	546	754	1,060	778
1982	411	335	966	502	1,325	522	752	988	742
1983	387	321	864	450	1,204	469	664	939	681
1984	379	300	779	416	1,129	444	653	840	632
1985	325	237	643	340	905	365	474	612	501
1986	259	198	499	263	669	308	412	423	384
1987	242	190	520	246	626	288	377	416	371
1988	267	202	576	301	692	294	411	513	416
1989	305	250	688	370	824	371	491	621	500
1990	309	279	728	407	877	409	491	662	532
1991	316	279	735	463	885	380	508	655	536
1992	340	295	700	418	955	386	513	673	551
1993	337	288	766	486	1,000	373	573	701	573
1994	345	314	797	504	1,090	390	620	741	608
1995	335	320	803	519	1,144	403	637	764	623
1996	358	338	823	535	1,244	419	658	799	656
1997	381	363	909	588	1,336	432	701	852	706
1998	385	390	982	631	1,477	457	753	956	767
1999	346	367	968	635	1,462	428	740	953	749
Dryland Cropland (Irrigation Potential)									
1978	409	387	741	590	1,128	471	873	953	757
1979	449	514	930	708	1,411	520	1,102	1,152	926
1980	533	565	1,132	767	1,733	628	1,282	1,352	1,107
1981	680	533	1,225	880	1,785	733	1,432	1,402	1,192
1982	658	535	1,097	833	1,665	685	1,411	1,268	1,108
1983	563	462	975	680	1,462	654	1,175	1,160	979
1984	507	441	911	638	1,349	631	1,050	1,069	905
1985	425	340	746	486	1,013	504	705	723	684
1986	312	300	598	367	746	377	573	545	524
1987	285	250	567	325	707	328	503	508	484
1988	310	266	646	380	801	339	576	623	552
1989	376	339	773	483	980	433	684	772	674
1990	371	367	840	539	1,056	473	706	816	720
1991	396	360	817	604	1,083	478	756	777	725
1992	411	381	823	658	1,124	476	792	835	753
1993	419	400	884	678	[3]1,195	445	883	888	794
1994	430	436	962	739	1,338	482	923	936	861
1995	429	424	1,002	781	1,397	493	941	979	891
1996	441	444	1,040	845	1,525	508	1,008	1,046	948
1997	458	475	1,103	917	1,643	543	1,114	1,130	1,018
1998	482	510	1,219	986	1,810	578	1,216	1,250	1,115
1999	436	480	1,216	956	1,792	538	1,173	1,172	1,081

See Footnotes at end of Table.

Appendix Table 4. Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999.[a]

Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	Dollars Per Acre								
Grazing Land (Tillable)									
1978	177	191	433	299	549	215	465	433	248
1979	186	229	521	347	701	259	479	574	288
1980	200	261	583	395	760	307	621	643	328
1981	251	257	622	435	881	332	697	636	357
1982	248	248	605	422	824	317	710	654	348
1983	198	234	571	405	739	315	555	589	315
1984	187	233	500	325	661	285	519	521	289
1985	146	180	392	259	510	205	339	357	218
1986	101	135	275	166	366	146	250	241	154
1987	77	99	267	135	336	115	187	236	124
1988	80	107	294	168	361	100	208	292	134
1989	104	150	362	217	418	130	253	341	173
1990	102	185	381	270	459	153	296	360	197
1991	107	200	394	308	495	168	338	366	213
1992	113	213	395	339	500	169	348	395	224
1993	121	195	427	359	524	171	371	418	227
1994	128	215	440	380	573	192	407	460	246
1995	128	223	456	400	611	193	414	471	253
1996	125	225	473	406	617	196	413	483	255
1997	135	250	512	440	686	200	433	519	276
1998	153	265	550	461	741	227	467	575	299
1999	165	270	569	456	735	234	470	575	306
Grazing Land (Nontillable)									
1978	115	126	308	216	384	119	268	315	153
1979	134	156	340	267	486	148	309	417	186
1980	143	169	394	304	549	190	346	473	209
1981	164	182	418	339	620	217	398	474	230
1982	168	183	412	329	584	195	418	472	227
1983	151	169	375	283	511	181	339	460	205
1984	134	152	350	248	455	168	328	384	184
1985	94	115	258	192	341	118	236	243	135
1986	71	85	179	131	262	84	158	178	98
1987	60	71	166	106	238	68	120	173	83
1988	58	76	189	128	270	75	152	220	91
1989	71	109	242	183	310	101	209	266	123
1990	83	134	272	225	340	113	233	298	146
1991	86	148	284	252	357	125	254	314	159
1992	90	155	302	267	373	126	261	316	166
1993	93	157	322	278	382	136	290	330	172
1994	98	167	325	302	388	153	307	354	183
1995	106	175	337	308	421	163	308	357	192
1996	103	173	347	299	428	155	296	367	189
1997	115	183	366	327	468	163	318	412	202
1998	128	199	395	366	516	189	337	473	224
1999	127	192	411	350	507	187	327	476	219

See Footnotes at end of Table.

Appendix Table 4. Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999.[a]

Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	Dollars Per Acre								
[5]Hayland									
1978	232	266	370	372	477	231	298	371	281
1979	287	308	436	397	593	281	345	509	332
1980	301	338	506	441	699	349	402	554	369
1981	323	331	558	482	738	368	417	532	375
1982	328	334	544	472	714	344	445	557	375
1983	290	286	509	408	658	344	375	496	331
1984	283	247	497	295	568	329	369	463	296
1985	261	206	332	273	470	250	258	311	241
1986	190	154	233	230	335	182	190	219	179
1987	160	119	188	195	271	148	175	201	144
1988	144	130	238	230	317	178	202	245	159
1989	194	183	295	275	382	220	268	291	210
1990	217	218	326	328	405	245	278	328	243
1991	225	240	330	350	434	252	286	361	261
1992	248	247	325	365	452	250	329	341	269
1993	242	265	365	366	473	251	360	358	283
1994	251	296	392	400	511	278	386	370	310
1995	260	300	418	408	528	277	397	385	317
1996	270	300	429	403	524	289	396	402	320
1997	295	325	459	438	575	300	403	435	346
1998	315	345	517	472	640	336	437	497	373
1999	318	325	507	457	625	330	412	502	359
Gravity Irrigated Cropland									
1978	1,246	796	1,030	1,545	1,624	1,134	1,412	1,404	1,410
1979	1,300	964	1,289	1,705	1,910	1,197	1,746	1,772	1,638
1980	1,369	1,020	1,547	1,976	2,317	1,329	2,046	2,026	1,906
1981	1,555	1,054	1,781	2,088	2,403	1,493	2,230	2,026	2,030
1982	1,580	1,033	1,771	2,053	2,269	1,598	2,254	1,924	1,994
1983	1,361	1,000	1,430	1,798	1,969	1,412	1,872	1,854	1,737
1984	1,269	1,020	1,429	1,613	1,838	1,250	1,762	1,639	1,601
1985	1,042	81	1,102	1,304	1,329	1,010	1,283	1,171	1,214
1986	754	612	900	940	975	867	963	957	920
1987	650	567	775	802	959	718	863	843	826
1988	668	691	862	948	1,151	740	994	956	947
1989	815	900	1,100	1,210	1,462	841	1,232	1,170	1,182
1990	841	900	1,186	1,413	1,513	895	1,390	1,285	1,287
1991	834	917	1,250	1,518	1,622	975	1,480	1,306	1,363
1992	889	1,035	1,221	1,563	1,653	1,021	1,583	1,413	1,418
1993	857	1,058	1,246	1,609	1,730	1,018	1,643	1,479	1,461
1994	875	1,070	1,250	1,666	1,842	1,093	1,728	1,568	1,533
1995	857	1,065	1,260	1,671	1,887	1,090	1,731	1,606	1,548
1996	870	1,070	1,361	1,738	1,989	1,138	1,800	1,697	1,621
1997	890	1,115	1,466	1,858	2,160	1,167	1,943	1,853	1,740
1998	925	1,150	1,575	1,972	2,340	1,200	2,042	1,936	1,847
1999	894	1,050	1,575	1,861	2,247	1,198	1,945	1,813	1,768

See Footnotes at end of Table.

Appendix Table 4. Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999.[a]

Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	Dollars Per Acre								
Center Pivot Irrigated Cropland[b]									
1978	771	678	956	877	1,484	813	1,023	1,286	947
1979	915	770	1,164	1,076	1,690	895	1,291	1,590	1,114
1980	894	886	1,372	1,223	2,043	971	1,535	1,795	1,272
1981	973	816	1,456	1,312	2,110	1,105	1,732	1,900	1,341
1982	989	810	1,332	1,270	2,010	1,123	1,681	1,748	1,293
1983	847	769	1,217	1,016	1,727	926	1,391	1,643	1,130
1984	809	698	1,130	969	1,655	827	1,350	1,465	1,049
1985	691	581	875	850	1,243	691	1,055	1,020	833
1986	496	400	700	628	970	558	788	788	634
1987	417	396	703	541	888	487	665	723	580
1988	446	441	800	622	1,038	548	792	820	661
1989	532	604	993	779	1,320	683	1,021	1,056	841
1990	619	710	1,090	910	1,393	765	1,117	1,133	935
1991	651	714	1,129	1,053	1,461	748	1,229	1,194	977
1992	681	740	1,084	1,085	1,510	783	1,263	1,228	1,000
1993	641	745	1,156	1,160	1,593	799	1,356	1,346	1,045
1994	690	800	1,215	1,200	1,707	850	1,425	1,413	1,107
1995	693	825	1,254	1,268	1,793	882	1,454	1,474	1,149
1996	710	913	1,320	1,340	1,930	981	1,550	1,565	1,235
1997	748	962	1,427	1,507	2,111	1,058	1,696	1,725	1,338
1998	829	1,020	1,583	1,698	2,332	1,139	1,863	1,907	1,471
1999	750	984	1,581	1,616	2,288	1,124	1,830	1,806	1,428
All Land Average[c]									
1978	279	201	674	608	1,125	363	796	844	500[d]
1979	307	244	836	699	1,376	405	970	1,044	597[d]
1980	333	269	989	800	1,670	472	1,139	1,215	695[d]
1981	397	271	1,077	86	1,748	538	1,268	1,260	749[d]
1982	396	269	1,004	843	1,643	527	1,272	1,173	720[d]
1983	343	248	890	734	1,475	480	1,057	1,099	642[d]
1984	318	229	829	654	1,341	442	990	989	588[d]
1985	258	180	664	528	1,007	347	706	689	450[d]
1986	190	136	522	379	745	273	543	518	339[d]
1987	165	115	502	324	707	232	474	482	306[d]
1988	173	124	567	385	817	241	545	579	346[d]
1989	210	171	689	495	1,009	300	673	711	432[d]
1990	219	202	744	580	1,069	331	734	763	473[d]
1991	226	215	747	639	1,115	341	787	756	492[d]
1992	239	226	737	669	1,156	348	827	800	510[d]
1993	239	226	790	693	1,217	346	885	845	531[d]
1994	249	244	835	728	1,325	375	935	894	566[d]
1995	250	251	860	744	1,378	384	944	925	582[d]
1996	254	256	895	769	1,479	398	984	978	608[d]
1997	269	275	962	833	1,600	417	1,066	1,057	654[d]
1998	288	295	1,053	897	1,754	450	1,140	1,162	710[d]
1999	275	285	1,052	859	1,718	439	1,099	1,111	690[d]

[a] February 1st estimates reported in the annual UNL Nebraska Farm Real Estate Market Developments Surveys.
[b] Pivot not included in per acre value.
[c] Weighted average based upon acreage in each land type.
[d] All land average for state may not conform to USDA series due to different acreage weighting. In addition, the USDA series includes farm buildings in its per acre estimates of value.

Appendix Table 5. Index of Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999. (1982 = 100).[a]

[2]Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	(Index, 1982 = 100)								
Dryland Cropland (No Irrigation Potential)[6]									
1978	70	75	67	64	62	69	62	67	66
1979	77	95	84	79	80	74	72	82	81
1980	84	101	95	94	98	87	83	98	95
1981	102	103	104	103	106	105	100	107	105
1982	100	100	100	100	100	100	100	100	100
1983	94	96	89	90	91	90	88	95	92
1984	92	89	81	83	85	85	87	85	85
1985	79	71	67	68	68	70	63	62	68
1986	63	59	52	52	50	59	55	43	52
1987	59	57	54	49	47	55	50	42	50
1988	65	60	60	60	52	56	55	52	56
1989	74	74	71	74	62	71	65	63	67
1990	75	83	75	81	66	78	65	67	72
1991	77	83	76	92	67	73	68	66	72
1992	83	88	72	95	72	74	68	68	74
1993	80	86	79	97	75	71	76	71	77
1994	84	93	83	100	82	75	82	75	82
1995	82	95	83	103	86	77	85	77	84
1996	88	100	85	106	94	80	88	81	88
1997	93	108	94	117	101	83	93	86	95
1998	94	116	102	126	111	88	100	97	103
1999	84	110	100	127	110	82	98	96	101
Dryland Cropland (Irrigation Potential)									
1978	62	72	68	71	68	69	62	75	68
1979	68	96	85	85	85	76	78	91	84
1980	81	106	103	92	104	92	91	107	100
1981	103	100	112	106	107	107	101	111	108
1982	100	100	100	100	100	100	100	100	100
1983	86	86	89	82	88	95	83	91	88
1984	77	82	83	77	80	92	74	84	82
1985	65	64	68	58	61	74	50	57	62
1986	47	56	55	44	45	55	41	43	47
1987	43	47	52	39	42	48	36	40	44
1988	47	50	59	46	48	49	41	49	50
1989	57	63	70	58	59	63	48	61	61
1990	56	69	77	65	63	69	50	64	65
1991	60	67	74	73	65	70	54	61	65
1992	62	71	75	79	68	69	56	66	68
1993	64	75	81	81	72	65	63	70	72
1994	64	81	88	89	80	70	65	74	77
1995	65	79	91	94	84	72	67	77	80
1996	67	83	94	102	92	74	72	82	85
1997	70	89	101	110	99	79	79	89	92
1998	73	95	111	118	109	84	86	99	101
1999	66	90	111	115	108	79	83	101	98

See Footnotes at end of Table.

Appendix Table 5. Index of Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999. (1982 = 100).[a]

[2]Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	(Index, 1982 = 100)								
Grazing Land (Tillable)[7]									
1978	71	77	72	71	67	68	65	66	71
1979	75	92	86	82	85	82	67	88	83
1980	81	105	96	94	92	97	87	98	94
1981	101	104	103	103	107	105	98	97	103
1982	100	100	100	100	100	100	100	100	100
1983	80	94	94	96	90	99	78	90	91
1984	75	94	83	77	80	90	73	78	83
1985	59	73	65	61	62	65	48	55	63
1986	41	54	45	39	44	46	35	37	44
1987	31	40	44	32	41	36	26	36	36
1988	32	43	49	40	44	32	29	45	39
1989	42	60	60	51	51	41	36	52	50
1990	41	75	63	64	56	48	42	55	57
1991	43	81	65	73	60	53	48	56	61
1992	46	86	65	80	61	53	49	60	64
1993	49	79	71	85	64	54	52	64	65
1994	52	87	73	90	70	61	57	70	71
1995	52	90	75	95	74	61	58	72	73
1996	51	91	78	96	75	62	58	74	74
1997	54	101	85	104	83	63	61	79	79
1998	62	107	91	109	90	72	66	88	86
1999	67	109	94	108	89	74	66	88	88
Grazing Land (Nontillable)									
1978	68	69	75	66	66	61	64	67	67
1979	80	85	83	81	83	76	74	88	82
1980	85	92	96	92	94	97	83	100	92
1981	98	99	101	103	106	111	95	100	101
1982	100	100	100	100	100	100	100	100	100
1983	90	92	91	86	88	93	81	97	90
1984	80	83	85	75	78	86	78	81	81
1985	56	63	63	58	58	61	56	51	59
1986	42	46	43	40	45	43	38	38	43
1987	36	39	40	32	41	35	29	37	37
1988	35	42	46	39	46	38	36	47	40
1989	42	60	59	56	53	52	50	56	54
1990	49	73	66	68	58	58	56	63	64
1991	51	81	69	77	61	64	61	67	70
1992	54	85	73	81	64	65	62	67	73
1993	55	86	78	84	65	70	69	70	76
1994	58	91	79	92	66	78	73	75	81
1995	63	96	82	94	72	84	74	76	85
1996	61	95	84	91	73	80	71	78	84
1997	68	100	89	99	80	84	76	85	89
1998	76	109	96	111	88	97	81	100	99
1999	76	105	100	106	87	96	78	101	96

See Footnotes at end of Table.

Appendix Table 5. Index of Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999. (1982 = 100).[a]

[2]Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	(Index, 1982 = 100)								
Hayland[8]									
1978	71	80	68	79	67	67	67	67	75
1979	88	92	80	84	83	82	78	91	89
1980	92	101	93	93	98	101	90	99	98
1981	98	99	103	102	103	107	94	96	100
1982	100	100	100	100	100	100	100	100	100
1983	88	86	94	86	92	100	84	89	88
1984	86	74	91	63	80	96	83	83	79
1985	80	62	61	58	66	73	58	56	64
1986	58	46	43	49	47	53	43	39	48
1987	49	36	35	41	38	43	39	36	38
1988	44	39	44	49	44	52	45	44	42
1989	59	55	54	58	54	64	59	52	56
1990	66	65	60	69	57	71	62	59	65
1991	69	72	61	74	61	73	64	65	70
1992	76	74	60	77	63	73	74	61	72
1993	74	79	67	78	66	73	81	64	75
1994	77	89	72	85	72	81	87	66	83
1995	79	90	77	86	74	81	89	69	85
1996	82	90	79	85	73	84	89	72	85
1997	90	97	84	93	81	87	91	78	92
1998	96	103	95	100	90	98	98	89	99
1999	97	97	93	97	88	96	93	90	96
Gravity Irrigated Cropland									
1978	79	77	58	75	72	71	63	73	71
1979	82	93	73	83	84	75	77	92	82
1980	87	99	87	96	102	83	91	105	96
1981	98	102	101	102	106	93	99	105	102
1982	100	100	100	100	100	100	100	100	100
1983	86	97	81	88	87	88	83	96	87
1984	80	99	81	79	81	78	78	85	80
1985	66	79	62	64	59	63	57	61	61
1986	48	59	51	46	43	54	43	50	46
1987	41	55	44	39	42	45	38	44	41
1988	42	67	49	46	51	46	44	50	47
1989	52	87	62	59	64	53	55	61	59
1990	53	87	67	69	67	56	62	67	65
1991	53	89	71	74	71	61	66	68	68
1992	56	100	69	76	73	64	70	73	71
1993	54	102	70	78	76	64	73	77	73
1994	55	104	71	81	81	68	77	81	77
1995	54	103	71	81	83	68	77	83	78
1996	55	104	77	85	88	71	80	88	81
1997	56	108	83	91	95	73	86	96	87
1998	59	111	89	96	103	75	91	101	93
1999	57	102	89	91	99	75	86	94	89

See Footnotes at end of Table.

Appendix Table 5. Index of Average Reported Value of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1978-1999. (1982 = 100).[a]

[2]Type of Land & Year	Agricultural Statistics District								
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast	State[c]
	(Index, 1982 = 100)								
Center Pivot Irrigated Cropland[b]									
1978	78	84	72	69	74	72	61	74	73
1979	93	95	87	85	84	80	77	91	86
1980	90	109	103	96	102	86	91	103	98
1981	98	101	109	103	105	98	103	109	104
1982	100	100	100	100	100	100	100	100	100
1983	86	95	91	80	86	82	83	94	87
1984	82	86	85	76	82	74	80	84	81
1985	70	72	66	67	62	62	63	58	64
1986	50	49	53	49	48	50	47	45	49
1987	42	49	53	43	44	43	40	41	45
1988	45	54	60	49	52	49	47	47	51
1989	54	75	75	61	66	61	61	60	65
1990	63	88	82	72	69	68	66	65	72
1991	66	88	85	83	73	67	73	68	76
1992	69	91	81	85	75	70	75	70	77
1993	65	92	87	91	79	71	81	77	81
1994	70	99	91	94	85	76	85	81	86
1995	70	102	94	100	89	79	86	84	89
1996	72	113	99	106	96	87	92	90	96
1997	76	119	107	119	105	94	101	99	103
1998	84	126	119	134	116	101	111	109	114
1999	76	121	119	127	114	100	109	103	110
All Land Average[c]									
1978	70	75	67	72	68	69	63	72	69
1979	78	91	83	83	84	77	76	89	83
1980	84	100	99	95	102	90	90	104	97
1981	100	101	107	103	106	102	100	107	104
1982	100	100	100	100	100	100	100	100	100
1983	87	92	89	87	90	91	83	94	89
1984	80	85	83	78	82	84	78	84	82
1985	65	67	66	63	61	66	56	59	63
1986	48	51	52	45	45	52	43	44	47
1987	42	43	50	38	43	44	37	41	43
1988	44	46	56	46	50	46	43	49	48
1989	53	64	69	59	61	57	53	61	60
1990	55	75	74	69	65	63	58	65	66
1991	57	80	74	76	68	65	62	64	68
1992	60	84	73	79	70	66	65	68	71
1993	60	84	79	82	74	66	70	72	74
1994	63	91	83	86	81	71	74	76	79
1995	63	93	86	88	84	73	74	79	81
1996	64	95	89	91	90	76	77	83	84
1997	68	102	96	99	97	79	84	90	91
1998	72	110	105	106	107	85	90	99	99
1999	69	106	105	102	105	83	86	95	96

[a] February 1st estimates reported in the annual UNL Nebraska Farm Real Estate Market Developments Surveys.
[b] Pivot not included in per acre value.
[c] Weighted average based upon acreage in each land type.

Appendix Table 6. Historical Per Acre Value Range for Different Types and Grades of Land in Nebraska by Agricultural Statistics District, 1994-1999. [a]

District and Type of Land	Reported Value Per Acre											
	Low Grade						High Grade					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
	Dollars Per Acre											
Northwest:												
Dry Crop (No irr. pot.)	255	235	285	300	275	235	405	375	415	455	450	405
Dry Crop (Irr. pot.)	320	340	365	375	380	360	485	475	515	525	555	500
Grazing (Tillable)	110	115	110	120	120	130	155	160	145	160	170	205
Grazing (Nontillable)	75	80	85	100	100	95	120	125	120	130	145	150
Hayland	190	200	205	220	250	230	295	320	305	340	355	380
Gravity Irrigated	650	610	610	655	650	600	1,020	1,035	985	1,040	1,095	1,090
Center Pivot Irrigated[b]	485	530	605	635	570	530	810	785	810	865	915	830
North:												
Dry Crop (No irr. pot.)	225	245	250	275	275	270	385	395	405	450	475	465
Dry Crop (Irr. pot.)	320	360	375	400	415	360	570	570	550	600	685	575
Grazing (Tillable)	165	200	200	210	215	230	255	300	310	345	360	365
Grazing (Nontillable)	120	151	130	135	140	160	210	220	215	225	245	250
Hayland	250	240	245	250	280	240	395	405	420	500	495	455
Gravity Irrigated	785	700	850	890	900	900	1,265	1,200	1,250	1,350	1,430	1,335
Center Pivot Irrigated[b]	550	680	750	790	800	750	880	910	1,050	1,105	1,200	1,150
Northeast:												
Dry Crop (No irr. pot.)	560	565	590	625	710	725	940	970	985	1,090	1,275	1,200
Dry Crop (Irr. pot.)	710	750	760	765	935	960	1,110	1,090	1,115	1,175	1,350	1,385
Grazing (Tillable)	340	345	420	425	480	505	525	555	590	635	680	710
Grazing (Nontillable)	240	240	305	315	365	345	395	405	445	455	500	515
Hayland	290	295	335	360	450	425	445	450	490	550	630	640
Gravity Irrigated	940	985	1,070	1,080	1,190	1,240	1,375	1,340	1,520	1,630	1,835	1,710
Center Pivot Irrigated[b]	915	940	990	1,055	1,240	1,270	1,340	1,395	1,470	1,575	1,845	1,780
Central:												
Dry Crop (No irr. pot.)	400	410	385	430	470	500	645	665	670	705	735	765
Dry Crop (Irr. pot.)	595	610	605	605	695	700	1,040	1,005	1,070	1,170	1,210	1,170
Grazing (Tillable)	325	325	330	365	395	410	480	510	530	570	585	585
Grazing (Nontillable)	250	240	250	260	280	290	360	365	345	380	410	400
Hayland	320	325	320	320	365	375	475	510	480	530	565	545
Gravity Irrigated	1,130	1,130	1,245	1,310	1,445	1,325	1,815	1,810	1,930	2,070	2,200	2,045
Center Pivot Irrigated[b]	900	880	895	1,010	1,225	1,200	1,455	1,515	1,610	1,780	1,880	1,840

Appendix Table 6. Historical Per Acre Value Range for Different Types and Grades of Land in Nebraska by Agricultural Statistics District, 1994-1999. [a]

District and Type of Land	Reported Value Per Acre											
	Low Grade						High Grade					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
	Dollars Per Acre											
East:												
Dry Crop (No irr. pot.)	760	850	895	950	1,050	1,060	1,360	1,345	1,475	1,570	1,700	1,727
Dry Crop (Irr. pot.)	955	1,035	1,140	1,150	1,340	1,350	1,545	1,575	1,720	1,810	2,010	2,055
Grazing (Tillable)	445	435	465	490	555	480	710	705	720	800	865	780
Grazing (Nontillable)	315	325	330	370	380	395	470	515	520	555	630	605
Hayland	425	425	445	460	495	535	650	665	640	700	750	800
Gravity Irrigated	1,350	1,345	1,470	1,610	1,790	1,740	1,985	2,060	2,180	2,420	2,605	2,510
Center Pivot Irrigated[b]	1,245	1,255	1,415	1,570	1,750	1,720	1,925	1,975	2,115	2,370	2,595	2,585
Southwest:												
Dry Crop (No irr. pot.)	300	305	320	325	340	355	480	480	505	540	545	495
Dry Crop (Irr. pot.)	360	385	400	400	430	450	565	580	595	645	650	610
Grazing (Tillable)	150	160	170	175	200	215	230	250	235	240	280	285
Grazing (Nontillable)	130	125	120	135	150	155	195	200	190	205	215	215
Hayland	225	235	240	250	290	315	365	395	415	425	465	455
Gravity Irrigated	825	760	765	795	870	900	1,210	1,165	1,215	1,295	1,365	1,280
Center Pivot Irrigated[b]	690	670	695	730	780	800	990	1,010	1,090	1,195	1,260	1,135
South:												
Dry Crop (No irr. pot.)	435	440	440	480	520	500	730	730	775	825	870	885
Dry Crop (Irr. pot.)	660	680	725	805	905	790	1,090	1,110	1,195	1,285	1,375	1,360
Grazing (Tillable)	316	320	300	325	340	350	475	495	490	505	555	555
Grazing (Nontillable)	230	235	230	245	250	235	355	345	340	370	385	390
Hayland	320	315	295	300	325	260	455	440	450	460	500	445
Gravity Irrigated	1,195	1,155	1,180	1,295	1,385	1,335	1,950	1,965	2,035	2,145	2,225	2,140
Center Pivot Irrigated[b]	965	955	980	1,090	1,340	1,270	1,625	1,650	1,765	1,925	2,035	1,965
Southeast:												
Dry Crop (No irr. pot.)	540	545	570	610	700	725	975	1,020	1,060	1,140	1,315	1,255
Dry Crop (Irr. pot.)	740	755	805	915	1,035	810	1,110	1,225	1,315	1,375	1,540	1,345
Grazing (Tillable)	365	340	345	400	465	455	540	545	540	575	725	670
Grazing (Nontillable)	275	280	285	320	375	330	425	410	425	455	570	565
Hayland	300	285	300	330	380	385	440	430	455	500	580	580
Gravity Irrigated	1,160	1,135	1,210	1,295	1,340	1,355	1,745	1,790	1,890	2,045	2,150	1,980
Center Pivot Irrigated[b]	1,065	1,080	1,175	1,300	1,485	1,220	1,545	1,790	1,880	2,050	2,185	1,950

[a] SOURCE: UNL Nebraska Farm Real Estate Market Developments Surveys.

[b] Pivot not included in per acre value.

Appendix Table 7. Historical Average Cash Rental Rates of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1981-1999.[a]

Type of Land and Year	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
Dryland Cropland	---------- Dollars Per Acre ----------							
1981	b	b	60	43	68	35	38	55
1982	b	b	67	38	71	34	38	60
1983	b	b	63	43	66	25	41	57
1984	b	b	63	41	72	29	44	57
1985	b	b	55	38	65	26	40	50
1986	b	b	52	29	58	25	35	45
1987	b	b	55	29	58	23	35	45
1988	b	b	58	35	62	25	38	48
1989	b	b	65	42	70	26	43	52
1990	b	b	65	44	72	31	41	54
1991	b	b	64	45	73	27	41	58
1992	b	b	60	47	73	28	43	57
1993	24	28	65	46	74	28	47	60
1994	b	33	66	44	79	32	45	62
1995	21	36	69	48	79	29	46	61
1996	21	35	69	49	81	31	47	62
1997	22	38	74	53	85	32	49	65
1998	22	39	79	53	88	32	51	70
1999	21	38	79	51	85	30	49	67
Gravity Irrigated Cropland								
1981	b	b	107	114	114	97	117	115
1982	100	96	b	119	116	97	115	115
1983	93	95	b	110	111	92	110	112
1984	110	95	100	115	113	89	115	113
1985	91	90	89	105	99	80	103	98
1986	78	73	80	90	97	77	93	88
1987	b	67	83	88	96	76	91	85
1988	b	70	94	94	103	76	95	93
1989	b	87	102	111	115	88	106	97
1990	74	88	99	113	113	96	106	104
1991	84	95	99	119	118	101	112	103
1992	83	101	98	109	119	99	118	109
1993	77	93	107	118	124	94	124	114
1994	83	100	110	121	131	107	124	122
1995	80	98	108	120	127	101	123	116
1996	78	99	108	124	127	104	126	118
1997	80	105	114	129	136	108	132	125
1998	91	105	116	129	136	103	133	128
1999	85	102	111	123	133	98	130	119

See Footnotes at end of Table.

Appendix Table 7. Historical Average Cash Rental Rates of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1981-1999.[a]

Type of Land and Year	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
Center Pivot Irrigated Cropland								
1981	b	71	117	102	118	91	126	119
1982	98	82	116	108	120	93	127	119
1983	90	86	101	100	114	83	117	116
1984	98	81	99	101	118	80	120	114
1985	b	69	93	90	104	81	111	96
1986	b	60	86	75	99	69	91	86
1987	b	62	83	77	97	66	82	86
1988	b	67	91	82	100	73	89	93
1989	b	88	99	98	110	81	101	100
1990	77	97	106	99	114	91	104	108
1991	85	98	108	109	120	94	115	110
1992	79	96	105	102	120	92	119	113
1993	79	83	107	108	124	93	124	114
1994	85	104	115	116	130	98	126	122
1995	86	100	118	117	128	101	127	122
1996	80	107	117	119	130	105	128	124
1997	90	115	124	130	142	110	138	132
1998	95	115	125	132	143	111	138	132
1999	90	109	122	124	143	110	136	127
Dryland Alfalfa								
1981	b	b	53	47	56	31	45	45
1982	b	b	57	47	64	31	43	47
1983	b	b	56	43	64	32	43	50
1984	b	b	50	46	63	36	44	45
1985	b	b	50	44	59	28	42	40
1986	b	b	47	32	52	25	44	40
1987	b	b	41	32	53	b	41	37
1988	b	b	52	36	58	b	42	39
1989	b	b	59	41	64	b	56	48
1990	b	b	62	49	67	30	b	48
1991	b	38	62	57	71	28	b	49
1992	b	36	56	46	58	b	50	48
1993	b	27	65	47	66	31	50	54
1994	b	b	65	46	70	37	51	52
1995	b	b	68	50	73	b	54	57
1996	b	b	68	52	78	b	51	54
1997	b	b	72	56	82	b	54	60
1998	b	b	79	58	86	b	59	64
1999	b	b	80	54	86	b	b	64

See Footnotes at end of Table.

Appendix Table 7. Historical Average Cash Rental Rates of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1981-1999.[a]

Type of Land and Year	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
Irrigated Alfalfa								
1981	b	b	88	92	96	b	90	b
1982	b	b	75	87	100	56	90	b
1983	b	b	78	89	105	70	84	b
1984	b	b	80	83	96	68	84	b
1985	b	b	74	80	87	b	69	b
1986	b	b	68	58	69	b	68	b
1987	b	b	61	62	70	b	68	b
1988	b	b	72	66	78	b	68	b
1989	b	b	89	88	92	b	100	b
1990	b	b	96	95	93	90	111	b
1991	b	b	98	98	102	78	98	b
1992	b	b	88	81	82	b	94	b
1993	b	b	96	96	92	b	100	b
1994	b	b	99	93	101	b	95	b
1995	b	b	99	102	101	b	103	b
1996	b	b	108	106	108	b	109	b
1997	b	b	113	106	119	b	b	b
1998	b	b	118	112	124	b	b	b
1999	b	b	112	108	119	b	b	b
Other Hayland								
1981	b	21	b	37	39	34	b	34
1982	b	18	b	30	b	b	b	34
1983	b	b	b	41	b	b	b	31
1984	b	b	b	32	44	29	b	36
1985	b	b	b	38	38	b	b	28
1986	b	b	b	26	29	b	b	26
1987	b	b	b	28	32	b	b	24
1988	b	b	b	26	31	b	b	31
1989	b	b	b	30	44	b	b	34
1990	b	b	b	39	44	34	b	38
1991	b	18	37	37	43	35	b	33
1992	b	21	31	30	34	b	27	30
1993	b	22	38	34	38	b	35	29
1994	b	b	38	37	39	b	33	29
1995	b	b	41	40	44	b	31	34
1996	b	b	42	40	40	b	31	36
1997	b	b	42	43	44	b	32	38
1998	b	b	48	43	50	b	35	40
1999	b	b	48	38	48	b	b	b

See Footnotes at end of Table.

Appendix Table 7. Historical Average Cash Rental Rates of Nebraska Farmland for Different Types of Land by Agricultural Statistics District, 1981-1999.[a]

Type of Land and Year	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
Pastureland (Per-Acre)								
1981	6	8	33	16	28	10	14	26
1982	5	9	31	15	22	9	16	24
1983	6	9	26	16	21	9	14	24
1984	6	8	25	16	23	9	16	23
1985	5	6	20	13	23	7	14	20
1986	5	b	16	10	22	6	10	16
1987	4	4	18	10	20	5	11	15
1988	4	5	20	12	21	6	12	18
1989	5	7	23	15	23	7	15	19
1990	5	9	25	17	25	9	15	20
1991	6	10	26	20	27	10	17	22
1992	7	12	25	18	25	12	18	21
1993	6	10	24	21	27	10	19	21
1994	9	11	30	21	28	11	20	23
1995	7	11	31	21	27	12	19	24
1996	7	11	30	20	28	12	19	24
1997	8	12	30	21	29	12	20	25
1998	8	12	31	22	30	12	21	25
1999	7	12	31	21	29	11	20	23
	---------- **Dollars Per AUM** ----------							
Pasture (Per Animal Unit/Mo.)[c]								
1981	13.00	13.30	12.85	15.80	12.65	14.40	13.75	12.90
1982	13.00	12.50	15.25	15.95	13.85	16.00	15.00	14.95
1983	13.40	16.60	16.50	16.65	14.50	15.45	15.21	15.81
1984	13.20	15.90	15.30	16.55	14.10	15.25	14.75	15.60
1985	12.20	12.70	12.90	13.00	12.80	13.60	12.80	13.60
1986	10.70	10.50	11.00	10.60	10.10	10.40	10.70	11.30
1987	9.55	10.35	10.10	10.55	10.20	10.25	10.50	10.50
1988	9.50	11.00	10.90	11.30	13.00	12.70	12.65	13.50
1989	11.35	14.50	14.00	14.50	13.25	12.80	14.20	13.70
1990	12.90	16.75	15.55	17.80	15.70	17.40	15.00	15.35
1991	14.85	20.00	18.00	20.30	19.50	18.25	17.50	18.00
1992	14.60	21.00	18.80	19.95	17.40	17.65	19.00	18.00
1993	16.40	21.30	18.50	22.35	19.85	20.75	20.40	19.85
1994	17.20	23.25	19.70	23.00	21.55	23.00	23.00	21.60
1995	16.75	23.40	19.90	23.00	20.50	22.30	22.20	20.30
1996	16.40	23.00	18.35	21.80	21.00	20.35	21.15	20.05
1997	17.00	23.50	20.50	22.25	22.30	21.20	21.20	20.75
1998	18.10	23.70	21.00	23.40	23.60	23.40	22.20	21.70
1999	16.70	23.00	21.60	23.25	21.90	23.25	22.00	20.40

[a] Reporter's annual estimates of cash rental rates in the annual UNL Nebraska Farm Real Estate Market Developments Survey Series.
[b] Insufficient number of reports.
[c] Animal unit month (AUM) refers to sufficient forage capacity to sustain an animal unit (1,000 lb. cow or equivalent) for one month during the normal range season.

Appendix Table 8: Estimated Market Value of Agricultural Land and Buildings Per Acre by Nebraska County, Census Year 1940-1997. [ab]

County	1940	1945	1950	1954	1959	1964	1969	1974	1978	1982	1987	1992	1997
	Dollars per acre												
Nebraska	24	35	58	72	89	109	154	282	525	701	457	514	645
Adams	31	50	82	105	144	173	276	580	1099	1348	793	985	1283
Antelope	24	41	62	78	98	124	178	308	584	881	554	711	842
Arthur	6	8	16	19	26	43	54	86	114	210	225	176	208
Banner	7	12	29	36	49	65	73	147	267	310	263	289	310
Blaine	5	7	12	20	30	39	49	100	125	244	197	160	196
Boone	31	41	66	80	94	101	164	278	556	892	647	713	952
Box Butte	12	18	39	42	58	78	97	169	394	522	315	452	347
Boyd	15	21	33	52	58	73	90	161	273	320	252	293	307
Brown	6	9	17	26	36	56	74	147	322	354	329	292	364
Buffalo	27	42	62	87	123	144	213	381	834	960	605	773	941
Burt	64	110	158	189	221	245	365	632	1145	1594	834	1050	1371
Butler	59	92	134	169	174	208	321	518	1054	1170	774	968	1178
Cass	67	95	142	166	211	228	343	625	954	1429	952	1233	1576
Cedar	44	63	100	127	139	155	208	346	648	828	620	743	925
Chase	14	21	40	56	64	74	115	265	487	710	455	515	756
Cherry	6	8	15	20	31	42	49	89	143	373	248	182	200
Cheyenne	18	29	64	76	94	98	116	212	330	468	366	343	434
Clay	33	57	83	121	159	216	358	621	1231	1556	916	1114	1229
Colfax	56	96	159	189	200	219	323	516	949	1524	884	1026	1417
Cuming	66	113	181	225	232	251	339	586	1256	1538	858	1101	1571
Custer	14	18	30	41	53	74	107	184	336	441	265	405	444
Dakota	53	70	111	131	163	178	260	449	896	1107	711	898	1015
Dawes	9	12	22	26	42	48	57	109	193	247	260	183	266
Dawson	38	51	86	130	153	200	267	464	758	1064	588	868	859
Deuel	23	44	72	88	110	121	136	260	449	580	383	401	497
Dixon	42	68	102	125	138	149	222	350	727	863	580	698	868
Dodge	77	121	200	226	257	292	413	681	1222	1664	946	1345	1654
Douglas	114	147	227	307	534	504	645	1031	1504	2125	1305	1663	2261
Dundy	12	17	31	39	45	58	75	162	314	569	378	363	480
Fillmore	41	64	96	128	156	223	323	604	1144	1400	837	1059	1383
Franklin	20	33	48	66	90	112	159	391	711	1015	544	793	812
Frontier	14	20	30	38	51	62	95	227	396	536	312	334	480
Furnas	20	32	48	62	73	94	135	288	509	579	400	467	539
Gage	59	78	108	114	137	172	255	402	896	927	598	716	899
Garden	9	13	29[13]	29	37	51	63	110	201	284	216	187	252
Garfield	8	11	21	31	43	54	72	132	210	462	223	253	326
Gosper	22	29	46	66	93	99	167	362	654	750	435	576	577
Grant	7	8	13	21	30	31	41	77	123	274	171	203	201
Greeley	19	22	40	53	60	83	118	226	401	559	334	436	646
Hall	39	63	119	152	205	249	385	651	1165	1442	911	1046	1449
Hamilton	37	67	113	148	201	298	432	810	1456	1756	981	1351	1626
Harlan	22	35	55	74	77	107	157	354	519	843	535	587	721
Hayes	13	18	31	50	47	58	80	179	309	422	322	275	591
Hitchcock	17	26	51	57	69	80	106	200	352	691	356	331	465
Holt	11	14	27	35	48	71	96	190	423	551	329	370	547
Hooker	3	6	13	19	29	29	41	69	96	291	273	118	158
Howard	25	38	60	70	83	116	187	338	612	807	442	582	828
Jefferson	43	58	78	101	123	147	228	387	910	1006	519	736	916
Johnson	48	68	89	98	113	130	190	365	667	708	519	660	826
Kearney	34	55	88	124	150	182	304	645	1123	1483	885	1137	1366

See Footnotes at end of table

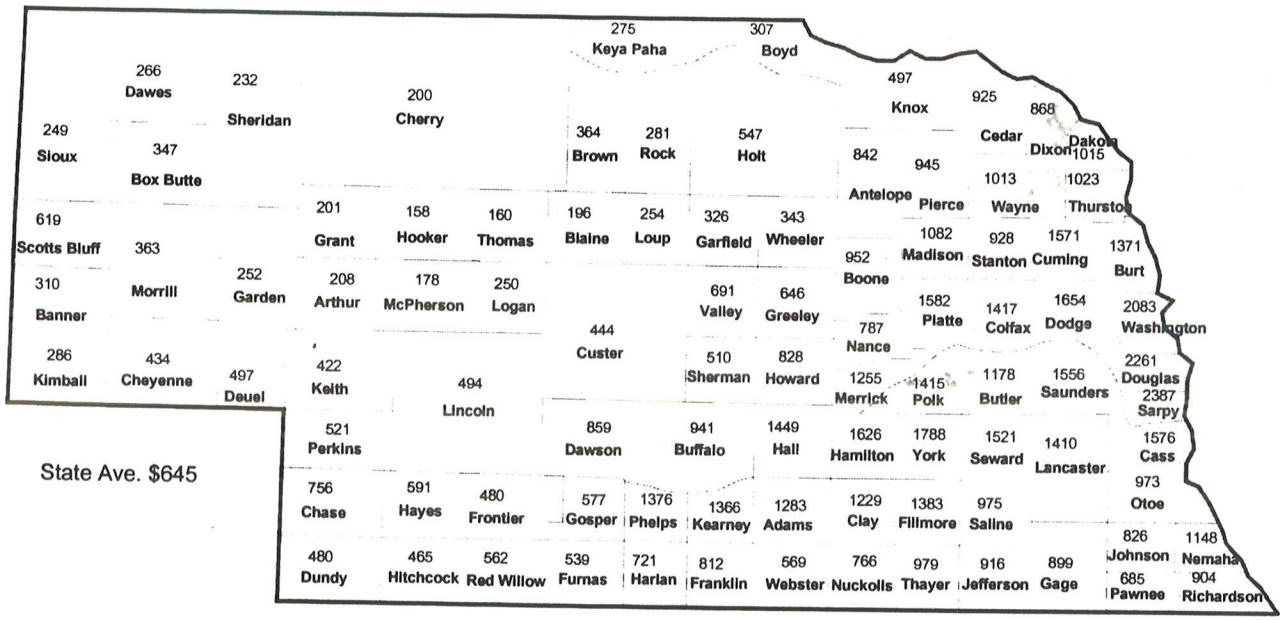
Appendix Table 8: (Continued)

County	1940	1945	1950	1954	1959	1964	1969	1974	1978	1982	1987	1992	1997
	Dollars per acre												
Keith	17	22	38	56	83	88	109	204	442	544	387	292	422
Keya Paha	6	9	18	24	36	54	64	114	231	213	255	224	275
Kimball	10	18	36	45	54	72	75	179	258	334	221	243	286
Knox	23	37	58	76	86	95	130	214	402	533	432	452	497
Lancaster	56	82	115	153	182	222	323	568	1000	1246	727	1023	1410
Lincoln	12	17	32	35	54	67	99	177	303	526	385	321	494
Logan	7	12	22	25	35	51	62	110	187	273	280	213	250
Loup	7	10	19	24	38	61	69	122	192	263	187	185	254
McPherson	4	6	16	21	25	35	48	86	120	210	117	148	178
Madison	43	71	109	137	155	165	245	405	750	1149	764	851	1082
Merrick	40	62	96	133	166	216	299	498	1032	1081	697	873	1255
Morrill	12	15	31	32	53	65	84	166	349	400	337	271	363
Nance	30	44	62	72	94	128	179	309	642	872	525	610	787
Nemaha	67	95	135	173	168	194	275	491	818	1190	705	763	1148
Nuckolls	29	42	57	77	97	130	188	347	702	834	491	553	766
Otoe	61	89	117	132	158	180	259	472	809	1037	684	846	973
Pawnee	42	61	83	88	111	118	173	299	668	689	481	564	685
Perkins	18	33	66	75	95	102	132	289	551	624	433	495	521
Phelps	40	54	92	123	152	181	285	676	1190	1480	866	1157	1376
Pierce	38	60	92	110	130	150	205	370	732	1022	612	834	945
Platte	48	77	131	164	171	198	280	498	926	1527	1092	1090	1582
Polk	49	82	134	163	174	244	376	624	1211	1692	910	1144	1415
Red Willow	18	28	44	57	76	102	119	244	464	618	379	469	562
Richardson	62	89	139	138	174	198	265	470	780	1011	597	702	904
Rock	7	9	18	27	38	54	72	132	262	345	266	218	281
Saline	63	84	117	139	168	188	286	467	868	1065	614	732	975
Sarpy	88	118	175	219	298	427	560	1033	1387	1644	1156	1711	2357
Saunders	71	102	151	182	197	227	365	604	1045	1258	905	1199	1556
Scotts Bluff	47	65	98	111	141	169	215	446	803	950	592	651	619
Seward	59	88	132	169	172	228	319	580	1122	1358	906	1003	1521
Sheridan	10	11	21	30	43	49	56	105	185	347	278	204	232
Sherman	18	26	41	52	64	84	134	252	463	611	365	504	510
Sioux	7	9	18	20	27	36	51	83	228	360	226	223	249
Stanton	46	73	111	138	148	172	233	395	740	948	662	723	928
Thayer	37	55	83	96	122	156	240	416	920	1112	657	702	979
Thomas	3	5	11	18	24	37	42	84	125	282	218	163	160
Thurston	48	66	108	139	161	176	263	425	841	1038	646	785	1023
Valley	23	29	47	60	72	102	143	263	471	653	464	538	691
Washington	72	101	186	187	232	278	418	761	1320	1577	1079	1361	2083
Wayne	56	88	141	164	179	186	272	392	879	1022	646	772	1013
Webster	19	30	46	55	64	98	131	292	545	608	394	548	569
Wheeler	7	13	22	35	45	57	85	156	297	483	319	350	343
York	48	84	129	162	208	267	407	716	1290	1576	1000	1455	1788

[a] Source: Barnard, Charles and John Jones, Farm Real Estate Values in the United States by Counties, 1950-1982, Economic Research Service, U.S. Department of Agriculture, Statistical Bulletin No. 751, March 1987, 1992, and 1997 Census of Agriculture, Nebraska.

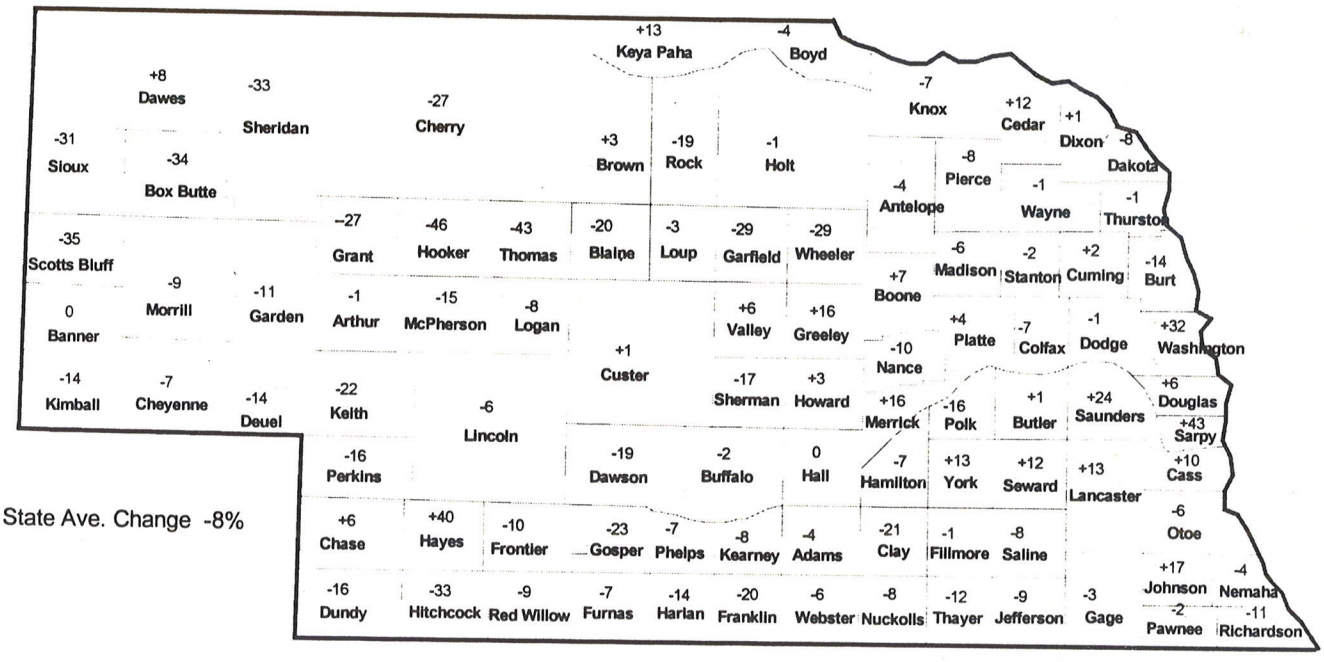
[b] Represents average value per acre as estimated by farm operators responding to the Census of Agriculture (Conducted approximately every five years.)

Appendix Figure 1: Average Value of Agricultural Land and Buildings Per Acre, by County in Nebraska, 1997*



* SOURCE: U.S. Census of Agriculture, 1997.

Appendix Figure 2: Percent Change in Average per Acre Value by County in Nebraska, From 1982 to 1997*



* SOURCE: U.S. Census of Agriculture, 1997.